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EXAMINING THE IMPACTS OF EPA AIR AND WATER REGULATIONS ON THE STATES AND THE AMERICAN PEOPLE

HEARING

BEFORE THE

SUBCOMMITTEE ON
THE INTERIOR

OF THE

COMMITTEE ON OVERSIGHT
AND GOVERNMENT REFORM
HOUSE OF REPRESENTATIVES

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EXAMINING THE IMPACTS OF EPA AIR AND WATER REGULATIONS ON THE STATES AND THE AMERICAN PEOPLE

Thursday, February 26, 2015,

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON THE INTERIOR,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:07 p.m. in room 2154, Rayburn House Office Building, the Honorable Cynthia Lummis [chairwoman of the subcommittee], presiding.

Present: Representatives Lummis, Chaffetz, Buck, Palmer, Gosar, Russell, Lawrence, Cartwright, and Plaskett.

Ms. LUMMIS. Without objection, the Chair is authorized to declare a recess at any time.

Good afternoon and welcome to the first hearing for the new Subcommittee on Interior of the Oversight and Government Reform Committee.

I am pleased to be holding this hearing on the impact on the American people of three proposed EPA rules.

Over the last year, the EPA has issued rules that are unprecedented in scope and among the most expensive in history. This overreach will impact families and businesses across the country.

The first rule we will examine is the redefinition of the term waters of the United States under the Clean Water Act. Despite two Supreme Court rulings that define the maximum reach of the Clean Water Act, the EPA has proposed a rule that will increase its regulatory authority far beyond current policy.

It would allow the EPA almost unconstrained access to regulate and burden landowners with endless environmental studies. Even more disturbing, the Waters of the U.S. rule still does not provide the regulatory certainty that farmers, small businesses and homeowners need.

Instead, it will result in more red tape, displace local management programs and shift limited resources away from working environmental programs.

We will also examine two EPA Clean Air Act rules that would fundamentally alter the relationship between States and the Federal Government. These rules would result in massive consumer electricity price increases and trillions of dollars in lost economic activity.

These rules are particularly damaging to my home State of Wyoming where we produce over 40 percent of the Nation's coal. They would force the retirement of coal power plants across the country, significantly increasing electricity and natural gas prices and threatens the reliability of the electric grid.

The first of these air regulations is called the Clean Power Plan. This proposed rule would require the regulation of existing power plants and unconstitutionally expand EPAs authority into the management of States energy generation.

It does this through so-called beyond the fence measures that regulate more than just power plants. These measures would mandate energy efficiency requirements on individual households. Compliance costs of the Clean Power Plan could be as high as $479 billion by 2030 and 43 States would face double digit electric price increases.

This massive cost comes with extremely limited benefits and violates the principles of federalism.

The second regulation we will examine is the EPAs proposal to update the air quality standards for ground level ozone. This benign sounding rule is actually widely considered to be the most expansive and expensive rule in the history of the United States.

Independent experts estimate the total possible cost of the rule at $1.7 trillion and 1.4 million job equivalence lost per year. This rule is so burdensome that some national parks, the Nation's most pristine environments, will be found to violate the new standards.

Today, we will hear from two State Attorney Generals, who will explain the impact these rules will have on the States. They will also discuss the EPAs utter lack of consultation with Native communities despite clear legal requirements.

We will also hear from two economists who raise significant questions about EPAs cost estimates. Just as importantly, these economists will also testify that the EPA is systematically overestimating the benefits of these rules by double counting benefits from other rules, ignoring basic accounting practices and projecting benefits out hundreds of years.

Ms. LUMMIS. With that, I would like to thank the witnesses in advance of your testimony. We are so grateful that you are here.

I now recognize Mrs. Lawrence, the Ranking Member of the Subcommittee on the Interior, for her opening Statement. Mrs. Lawrence, I am so pleased to be serving with you. I so enjoyed our visit the other night. Welcome to our collaboration. The microphone is yours.

Mrs. LAWRENCE. It is an honor to be a Member of Congress and to sit with the leadership that we have as the Chair for this committee.

Thank you, Madam Chairwoman. I want to thank you for holding this hearing.

I want to thank our witnesses for their testimony today.

In a special message to Congress in 1970, President Nixon stated: "As concern with the condition of our physical environment has intensified, it has become increasingly clear that we need to know more about the total environment, land, water and air." Indeed, the present government structure for dealing with environmental pollution often defies effective and concerted efforts.

In proposing that the Environmental Protection Agency be set up as a separate, new agency, "I am making an exception to one of my own principles that as a matter of effective and orderly administration, additional new, independent agencies normally should not be created. Because environmental protection cuts across so many jurisdictions and because arresting environmental deterioration is of great importance to the quality of life in our country and the world, I believe that in this case, a strong, independent agency is needed."

I want to start by saying that the EPA was not established to be red or blue. It was established to be green. It was established to help us protect our environment, our citizens and our children.

First, I would like to address the Clean Water Act which has been successful in past years ensuring that Americans have clean and safe water. Those of us who have been involved and informed know that there are some challenges across our country that are stepping up now and that we need to address.

I believe we all agree that clean water is vital to each of us for our drinking supply, for safe places to swim, for healthy fish, for growing crops, for beverage manufacturing, for energy generation and for a host of other uses.

The proposed EPA rule would improve the process for determining what types of water are and are not covered by the Clean Water Act. Contrary to the claim of detectors, the rule would clarify protection for streams and wetlands that form the foundation of the Nation's water resources.

It will not result in an expansion of Federal authority. Only waters that have been historically covered by the Clean Water Act are covered by the rule.

Turning our attention to the dangers of ozone exposure is equally important. More than 1,000 new studies demonstrate the health and environment harms of ozone. Exposure can cause difficulty breathing and airway inflammation. Ozone exposure is likely to cause permanent death from lung disease.

Children often suffer from a disproportionate burden of ozone related health impacts because their lungs and other organs are still developing. Nearly 26 million people have asthma in the United States, including 7.1 million children.

Fortunately over 40 years ago, Congress passed the Clean Air Act to protect public health and the environment.

Recently, EPA proposed new national air quality standards for ozone to lower the ozone in the atmosphere from 75 ppb to a range of 65 to 70 ppb by the year 2030. The Clean Power Plan has also been proposed in order to limit the amount of carbon pollution power plants will emit. Likewise, the Waters of the United States rule was proposed to clarify which bodies of water are or are not covered by the Clean Water Act.

History tells us that environmental regulations do not cause an economic calamity. In fact, in the past 40 years, the CDP has increased by 212 percent since the Clean Air and Clean Water Acts were enacted.

Clean air pollutions have decreased by 70 percent. Instead of killing jobs, as some opponents have claimed, the pollution control industry has generated more than $300 billion in revenue and $44 billion in exports and supported 1.5 million jobs.

None of the inflated costs of implementing these laws ever materialized. Industry innovation improved and thrived in response to new demands.

In closing, there have been numerous processes in the past few decades to clean up the air and water but more work is necessary to adequately protect public health from ozone, excessive carbon dioxide and water pollution and to mitigate the efforts of climate change.

I hope that we look at this industry and recognize the oppositions of some industries based on really scare mongering. History shows us that cleaning the air and water are both good for public health, good for our economy and good for our country.

Thank you.

Ms. LUMMIS. I thank the gentlelady from Michigan and look forward to our collaboration. Our districts just about couldn t be more different than two districts in the United States. She represents northern areas of Detroit, very urban, and my State of Wyoming is the most sparsely populated in the Nation, rich in clean air, clean water and natural resources.

This will be fun. I am very much looking forward to working with you. Thank you for your opening remarks.

I am now pleased to recognize Mr. Chaffetz, the Chairman of the full committee, for his Statement. Thank you, Mr. Chairman, for creating this subcommittee and giving us an opportunity to look at some issues that are so impactful for our citizens. The time is yours.

Mr. CHAFFETZ. Thank you. I thank you for being the chairwoman of this committee. We reconfigured this to give some focus not only between the Department of Interior but also the Forest Service, the Department of Energy and the EPA so that we, as the oversight committee, can look at the far reaching breadth rather than just have it siloed in one committee or another.

I appreciate all the members who will participate on these panels and in all these discussions.

I too am from the intermountain west. We are proud neighbors of Wyoming. Where we produce a lot of this energy. We have an abundance of coal, natural gas and oil shale. Yet every time I turn around, there seems to be some reason, some other implication that is put out there by the EPA.

We love the west; we love our mountains, our air, our water and our streams. I do think there is a role to create some bounds and rules of the road, but I do worry about how severe the EPA is in its approach.

It wasn t too long ago in this very room we found out that the person heading up Air and Water Quality, one of the most senior people at the EPA, we had a hearing, he had not shown up for work in years. He was convicted of fraud and is in jail. He had to pay hundreds of thousands of dollars in restitution to the government because he was telling his senior leadership that he was a CIA agent and that he was overseas in Afghanistan.

It begs the question, if he was so fraudulent that he actually went to jail, what about all the regulations that came into place for air and water quality during that time. It does beg the question.

We have had the Inspector General here talking about the problems they have with sexual harassment in the senior-most offices. We have had people here talking about the fact that they cannot seem to fire anyone and move them out the door.

Time and time again, the EPA has routinely been here talking about all these problems with mismanagement and waste. Yet, they want to go into our States and start telling people how to conduct their business.

Again, we need clean coal and good energy. I buy that. Let us also understand that there are very real impacts upon economies, jobs and peoples livelihoods. Their job role and responsibility is not to just shutdown everyone.

I really appreciate the panel who I think can give us a much broader scope and understanding of all the ramifications that come into place when you have the EPA come in. I appreciate the Attorney Generals who have taken time out of their busy schedule to give us their perspective from across the United States.

I look forward to some robust discussions today. I have great optimism for this panel and this subcommittee moving forward.

With that, I yield back.

Ms. LUMMIS. I thank the Chairman.

I will hold open the record for five legislative days for any member who would like to submit a written Statement.

We will now recognize our panel of witnesses. I am pleased to welcome the Honorable Tim Fox, Attorney General, State of Montana; the Honorable Leslie Rutledge, Attorney General, State of Arkansas; Dr. David Harrison, Senior Vice President, NERA Economic Consulting; Dr. Anne E. Smith, Ph.D, Senior Vice President, NERA Economic Consulting; and Dr. Susan F. Tierney, Ph.D, Senior Advisor, Analysis Group. Welcome all.

Pursuant to committee rules, all witnesses will be sworn before they testify. Please rise and raise your right hand.

Do you solemnly swear or affirm that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth?

[Witnesses respond in the affirmative.]

Ms. LUMMIS. In order to allow time for discussion, please limit your testimony to 5 minutes. Your entire written Statement will be made a part of the record.

I now would like to recognize Attorney General Fox for his opening Statement.

STATEMENT OF TIM FOX

Mr. FOX. Chairman Lummis, Congresswoman Lawrence and members of the committee, thank you for inviting me to speak here today.

I am Tim Fox, the Attorney General of Montana. Without hopefully offending any of the other members of the committee, Congresswoman Lawrence, you will be glad to hear that I am Detroit Tigers fan—go Tigers.

I will speak briefly this morning of my concerns with three regulatory initiatives by the United States Environmental Protection Agency. Two are rulemaking proposals and one involves an unprecedented action by EPA to exercise a preemptive veto of a Section 404 permit.

In a proposal published in the Federal Register on April 21, 2014, EPA proposes to amend the definition of “waters of the U.S.” in such a way that would extend the reach of the Clean Water Act to virtually all interState and intraState waters and all lands which could potentially affect such waters.

Montana is, for the most part, a headwater State, blessed with waters of exceptional quality. The people of Montana have taken steps to fully protect that priceless resource. Those steps begin with our State Constitution which provides comprehensive protections for our waters.

We have implemented those constitutional safeguards through the 1971 Montana Water Quality Act and regulations to implement the Act. Based on its Water Quality Act, Montana sought and was granted primacy to implement the Clean Water Act s permit system in the State but even beyond the permit protections, the Montana DEQ has broad authority to prevent pollution.

The point is that Montana has taken primary responsibility for its land and waters as was assumed by Congress when it enacted the Clean Water Act. There is no justification for extending the reach of the Clean Water Act in our State.

The overreach impinges indirectly on our State’s sovereignty and offends Congress Stated intention in the Clean Water Act to recognize, protect and preserve the primary rights of the States to manage their lands and water resources.

The second problematic proposed rule is EPAs June 18, 2014 existing source proposal under Section 111(d) of the Clean Air Act. I join the Attorneys General of 16 other States in comments on that proposal, but I also filed separate comments with Chairman Darrin Old Coyote of the Crow Nation. I want to talk just a minute about those comments.

I grew up Hardin, Montana on the Crow Reservation and developed a deep appreciation both for the Crow people and the problems they faced and continue to face. The Crow Nation has huge, undeveloped coal reserves and one operating mine, the Absaloka Mine which provides two-thirds of the Crow Nation’s annual non-Federal budget and is by far the largest private employer on the reservation.

Unfortunately, one of the very likely effects of EPA’s existing source rule would be to kill the market for the coal produced by the Absaloka Mine which is nearly all sold to Minnesota utilities. This will in turn kill the mine, in turn causing drastic loss of services and employment on the Crow Reservation.

EPA has a legal duty under Executive Order 13175 to ensure meaningful and timely input by tribal officials in the development of regulatory proposals that affect tribes. Aside from two “Dear Tribal Leader” form letters, nobody from the agency contacted the Crow Nation directly in a government to government contact as required by Executive Order 13175 and the Presidential Memo which implements the Order.

Given the consequences of the proposed rule to the Crow Nation, this doesn’t seem a sufficient effort on the part of EPA.

Third and last, the matter I want to address today is EPA's involvement and their actions relating to the proposed Pebble Mine project in Alaska.

In 1979, the EPA promulgated a rule providing the Administrator could prohibit the specification of a site under Section 404(c) before a permit application has been submitted to or approved by the Corps or a State.

This authority up to now has never been used to issue a preemptive veto. However, last year, the EPA proposed to use the authority to issue a preemptive veto before any formal application for a permit had been prepared or filed by the developer of the Pebble project.

As Montana's chief legal officer, it greatly concerns me that we can see a situation in our State where the Administrator of a Federal agency preemptively vetoes a development proposal before we have an opportunity to receive, review and comment on an application for permit.

Chairman Lummis, Congresswoman Lawrence and members of the committee, thank you again for giving me some time here today to speak on behalf of the people of Montana. I have submitted a more comprehensive written testimony for your consideration.

I am happy to answer any questions you may have. Thank you.

[Prepared Statement of Mr. Fox follows:]

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UNITED STATES HOUSE OF REPRESENTATIVES

Committee on Oversight and Government Reform

Subcommittee on the Interior

Written Testimony of Montana Attorney General Tim Fox

February 26, 2015

As Montana's Attorney General, one of my concerns is protecting our State's sovereignty, which is just another way of saying protecting Montanans' ability to exercise our right of self-government under our State's constitution, and to conduct our affairs in the way we think best. That means I believe it is my duty to stand up and push back when I perceive an agency of the federal government overreaching the authority given to it by Congress and proposing actions that infringe on our sovereignty or exceed an agency's authority. In connection with this committee's work, I appear today to convey my concerns with three recent agency actions which I believe to be ill-considered and which affect my State.

The first is the proposal published in the Federal Register April 21, 2014, wherein the EPA, along with the U.S. Army Corps of Engineers, proposes to amend the definition of "Waters of the U.S." in such a way that would extend the reach of the Clean Water Act to virtually all interstate and intrastate waters, and all lands which could potentially affect such waters.

Montana is, for the most part, a headwaters state blessed with waters of exceptional quality, and the people of Montana have taken steps to fully protect that priceless resource for ourselves, our downstream neighbors, and all of our progeny. Those steps begin with our state constitution, which declares "[A]ll surface, underground, flood, and atmospheric waters within the boundaries of the state" to be the property of the state for the use of its people (Mont. Const. art. IX, § 3(3)), and requires the legislature to "provide adequate remedies for the protection of the environmental life support system from degradation" and to "provide adequate remedies to prevent unreasonable depletion and degradation of natural resources." Mont. Const. art. IX, § 1(3). These constitutional safeguards are implemented by means of the Montana Water Quality Act, Mont. Code Ann. § 75-5-101 *et seq.*, a comprehensive water quality protection law enacted in 1971. The Montana Board of Environmental Review has promulgated regulations to implement the legislation, and the statutes and the regulations are implemented by the Montana Department of Environmental Quality (DEQ).

Montana sought and was granted primacy to implement the National Pollutant Discharge Elimination System (NPDES) permit system in our State, but even beyond the NPDES (MPDES in Montana) permit protections, the Montana DEQ has broad authority to enjoin pollution of state waters or the placement of waste where it will cause pollution, to require cleanup of any material which may pollute state waters, and to inspect and require monitoring to prevent pollution. Mont. Code Ann. § 75-5-601 *et seq.*

The point is that Montana has taken primary responsibility for its land and waters as was assumed by Congress when it enacted the Clean Water Act (33 U.S.C. § 1251(b)). The laws and regulations we implement and enforce assure the protection of the quality of traditional navigable waters in and flowing from our State. There accordingly is no justification, in terms of protection of the nation's navigable waters, for extending the reach of the Clean Water Act.

The agencies' proposal states at least twice (Federal Register, Vol. 79, No. 76, pp. 22189, 22192) that, pursuant to the U.S. Supreme Court decisions in *SWANCC* and *Rapanos*, the scope of regulatory jurisdiction of the Clean Water Act in the proposed rule is narrower than that under the existing regulations. It appears this remarkable assertion is based on the observation, at page 22192, that the proposal would delete the current "all other waters" subsection in the rule. However, the rules which would replace the deleted subsection, including the provisions containing new definitions for "neighboring," "riparian area," "floodplain," "tributary," and "significant nexus," as well as providing for inclusion of "other waters" on a case-by-case basis, appear clearly to extend jurisdiction of the EPA and the Corps of Engineers far more broadly. As I read the proposed rules, Clean Water Act jurisdiction would extend upgradient from traditional navigable waters into the lands of our State, no matter how remote from traditional navigable waters, which host occurrences of water that, due to gravity, could conceivably end up in a traditional navigable water.

The agencies seem to acknowledge the extension when, again at page 22192, they state that "Because Justice Kennedy identified 'significant nexus' as the touchstone for CWA jurisdiction, the agencies determined that it is reasonable and appropriate to apply the 'significant nexus' standard for CWA jurisdiction that Justice Kennedy's opinion applied to adjacent wetlands to other categories of water bodies as well . . . to determine whether they are subject to CWA jurisdiction."

I cannot agree it is appropriate to apply the "significant nexus" standard to other categories of water bodies. As the majority of the Supreme Court said in the *SWANCC* case: "We said in Riverside Bayview that the word 'navigable' in the statute was of 'limited import,' 474 U.S. at 133 . . . . But it is one thing to give a word limited effect and quite another to give it no effect whatever." This statement was confirmed by Justice Kennedy in his concurring opinion in the Rapanos case: "Congress' choice of words creates difficulties, for the Act contemplates regulation of certain 'navigable waters' that are not in fact navigable . . . . Nevertheless, the word 'navigable' in the Act must be given some effect. See SWANCC, supra, at 172." 547 U.S. 779. I believe that the agencies' proposed regulations would completely untether the scope of the

EPA's and the Corps' jurisdiction from the statutory requirement of navigability, and I think this is proven by comparing the agency proposal to what Justice Kennedy would allow:

> Through regulations or adjudication, the Corps may choose to identify categories of tributaries that, due to their volume of flow (either annually or on average), their proximity to navigable waters, or other relevant considerations, are significant enough that wetlands adjacent to them are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters.

547 U.S. 780, 781.

While this discussion was about tributaries and adjacent wetlands, it indicates a regulation must contain specific criteria that allow objective identification of jurisdictional waters. But in the agencies' proposal, the definitions of "neighboring," "riparian area," "floodplain," and "significant nexus," lack any such specific limiting or defining criteria as to volume of flow, proximity to navigable waters, or any other parameter. The only definition containing such criteria is the definition of "tributary," in its reference to bed, banks and ordinary high water mark, but after naming those, the definition quickly departs from any objectively identifiable criteria when it says: "In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this definition."

The overreach of the agencies' proposal is objectionable not for the protections the agencies seek to extend. Montanans long ago decided our waters are worth protecting and acted accordingly. The problem is that the agencies' overreach impinges directly on our state sovereignty. It offends Congress's stated intention in the Clean Water Act to recognize, protect and preserve the primary rights of the States to manage their lands and water resources. It violates, in my opinion, the admonitions of the U.S. Supreme Court that the Act's jurisdiction is and must be limited to waters that have a significant nexus to core waters. In short, the proposal seeks to extend the reach of the Act beyond what is allowed by the Commerce Clause.

As an example of the practical problems caused by the proposal's unwarranted impingement on our sovereignty, our Water Quality Act defines state waters in terms of "a body of water." Mont. Code Ann. § 75-5-103(34(a). The agencies' proposal, on the other hand, extends the requirements and procedures of the Clean Water Act, and the agencies' jurisdiction, to waters "located within" such broad areas as areas "bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal structure in that area . . ." and areas "bordering inland . . . waters that [were] formed by sediment deposition from such water . . . ." Our State, acting pursuant to the authorities I described earlier in this letter, may choose to protect water quality in such broad areas as these in a different fashion than would be imposed on us by the "one size fits all" requirements of the Clean Water Act as implemented by the agencies. Hence, under the proposal, we lose the ability to fashion our own remedies on lands and waters that are truly remote from traditional navigable waters, a result that violates Congress's expressed intent in enacting the Clean Water Act as well as the pronouncements of the U.S. Supreme Court.

Congress declined, in 2007, to enact proposed legislation which would have expressed the intention to extend the reach of the Clean Water Act to all waters in the nation "to the fullest extent that these waters, or activities affecting these waters, are subject to the legislative power of Congress under the Constitution." The fact Congress was unwilling to adopt this expression of intent indicates clearly the Clean Water Act is limited in its jurisdictional reach and that the agencies' proposal is beyond what is authorized by that Act.

The second matter I wish to bring to the Committee's attention is the EPA's June 18, 2014 proposal to create guidelines for carbon dioxide emissions from existing fossil-fueled power plants under section 111(d) of the Clean Air Act. I joined the Attorneys General of sixteen other States in comments on that proposal. In a nutshell, those comments detail six reasons the proposal should be withdrawn, beginning with the fact the proposal is beyond the agency's authority under the Clean Air Act. But I also filed separate comments with Chairman Darrin Old Coyote of the Crow Nation, and I want to draw the Committee's attention to those comments, because they provide a good example of what I believe to be the most significant problem with the way the EPA is doing business.

The Crow Nation encompasses 2.2 million acres of land in southcentral and southeastern Montana. I grew up in Hardin, on the Crow Reservation, and developed a great appreciation both for the Crow people and the problems they faced and continue to face. The Crow Nation has huge undeveloped coal resources, which today host one mine, the Absaloka Mine, which is operated by Westmoreland Resources. That mine produces 3 to 7 million tons of coal a year, providing production taxes and royalties to the Crow Nation--more than $20 million in 2010. This revenue is two-thirds of the Crow Nation's annual non-federal budget. In addition, the mine employs a 70% tribal workforce, with an average annual salary of $66,000, and a total payroll of around $18 million. The Mine is by far the largest private employer within the Reservation.

Unfortunately, one of the very likely effects of the EPA's existing source rule would be to kill the market for the coal produced by the Absaloka Mine, which is nearly all sold to Minnesota utilities, in turn killing the mine, in turn causing drastic hits to the Crow Nation's operating revenues, and causing loss of services and employment on the Crow Reservation.

Given that horrendous consequence, you would think EPA would have gone to the Crow Nation when it was putting together this rule proposal, told them of the potential consequences of the regulatory program the agency was considering, and asked them for their input. As a matter of fact, EPA has a legal duty under Executive Order 13175 to ensure meaningful and timely input by tribal officials in the development of regulatory proposals that affect tribes. To carry out that duty, what EPA did was send the Crow Nation two "Dear Tribal Leader" form letters, one late in 2013, and one in June, 2014, days before publication of the existing source rule proposal. Nobody from the agency contacted the Crow Nation directly in a government to government contact as required by Executive Order 13175 and the Presidential Memo which implements the Order. This despite the fact the Crow Nation is one of only three Tribes, out of 566 federally recognized tribes, for whom the mining of coal burned by electrical generating units is a significant piece of the Tribal economy.

Additionally, and this relates to both the "waters of the U.S." proposal and the existing source proposal, Executive Order 13563 requires federal agencies to propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs and to tailor their regulations to impose the least burden on society consistent with regulatory objectives. It requires regulations be based on an open exchange of information and perspectives among State, local and tribal officials. In my view, EPA is not living up to its obligations, and the people of our State may end up paying a steep price for that.

The third matter I wanted to address in this testimony involves EPA's actions relating to a proposed natural resource development in Alaska. The Corps of Engineers has primary responsibility for administering the Clean Water Act's § 404 cut and fill permit program. However, § 404(c), 33 U.S.C. 1344(c), gives the EPA Administrator the authority to prohibit the specification of any defined area as a disposal site (fill site) with respect to section 404 permits. In 1979, the EPA promulgated a rule under this section which provides that "[T]he Administrator may also prohibit the specification of a site under section 404(c) with regard to any existing or potential disposal site before a permit application has been submitted to or approved by the Corps or a state." 40 C.F.R. 231.1(a). This authority, up to now, has never been used to issue a preemptive veto. However, in 2014, the EPA proposed to use the authority to issue a preemptive veto, before any formal application for a 404 permit had even been prepared or filed by the developer. As Montana's chief law enforcement officer, it concerns me greatly that the Administrator of a federal agency could preemptively veto a resource development proposal in our State before our own state agencies had an opportunity to receive, review and comment on an application for permit submitted by a developer. Though the EPA has been enjoined from proceeding with its proposed veto pending further litigation by the Alaska developer, for possible violations of the Federal Advisory Committee Act, the very fact the agency had passed a regulation allowing it to so act, and that it would propose to so act without an application, concerns me greatly, and should concern this Committee.

This concludes my testimony and I thank the Committee for inviting me to testify.

Ms. LUMMIS. I thank the gentleman and look forward to visiting with him some time about the Purple Cow Restaurant in Hardin, Montana that I used to frequent when I was a younger gal.

Mr. FOX. Chairman Lummis, if I may, my mother was the hostess at the Purple Cow.

Ms. LUMMIS. That was one of my favorite places. I have pictures at the Purple Cow.

The chair now recognizes the Attorney General of the State of Arkansas, Ms. Rutledge, for 5 minutes.

STATEMENT OF LESLIE RUTLEDGE, ATTORNEY GENERAL, STATE OF ARKANSAS

Ms. RUTLEDGE. Chairman Lummis, Ranking Member Lawrence and members of the committee, thank you for inviting me to speak with you all today.

My name is Leslie Rutledge, Arkansas Attorney General. I am here today to give you a sense of our State, one that is rich in natural heritage and is known across the Nation as the natural State for rolling hills, dense woodlands, miles of rivers and lakes and how they will be impacted by overreaching regulations of the Environmental Protection Agency.

Specifically, the EPA exceeds its legal authority in three recently proposed rules: the Clean Power Plan, more stringent ground level ozone standards and changes to the definitions of the waters of the United States.

As Attorney General, I represent the interests of Arkansas utility rate payers. These are hardworking Arkansans, some who own their own small businesses, some run multigenerational family farms from Fayetteville to Warren to Texarkana to Jonesboro, and all points in between. I have heard grave concern about the EPA's proposed Clean Power Plan.

The rule requires Arkansas to meet an almost 45 percent reduction in carbon emissions from electric generating units by 2030. This is the sixth highest rate of reduction in the Nation imposed upon a State that ranks 46th in per capita income.

This is a rule that the EPA does not have the legal authority to issue. The EPA regulates coal-fired power plants such as the one in Independence County, where I grew up, under Section 112 of the Clean Air Act, not Section 111(b).

The law cannot be clearer. It specifically prohibits the EPA from invoking 111(b) where the source category is regulated under Section 112. The proposed rule mandates what each State must achieve rather than providing guidelines and procedures for States to use. This is a serious overreach of the EPA's authority and different from the implementation of any other limits set under the Clean Air Act.

My opposition to this rule begs the question whether I am for clean air. I certainly am and I can confidently say that all Arkansans are in favor of clean air.

The rule goes beyond the EPA's authority to regulate air pollution. It imposes a misguided, national energy policy and seeks to control the State's regulation of energy generation and usage.

Also, under the Clean Air Act, the EPA has proposed unnecessarily stringent ground level ozone standards. The proposed rule reduces the current standard of 75 ppm to somewhere between 60 to 70 ppm. A decrease to 60 ppm will have a devastating effect on Arkansas. At that level, almost all of Arkansas would likely be in non-attainment.

Anyone who has visited Arkansas would be hard pressed to believe that our beautiful mountains have a smog problem. Years of nonattainment would directly set back economic recovery that we have achieved in the past few years.

Likewise, the EPA's attempt to clarify the definition of the waters of the U.S. is so expansive that it would likely control land use activities over most of the United States. As Arkansas Attorney General, this is a major concern for me because this would drastically impact our farmers and ranchers.

Rather than clarifying, the rule complicates current law. The process for determining jurisdiction becomes a maize for both regulators and for the public to navigate. Arkansas' agricultural community would be left with increased uncertainty over the Clean Water Act.

Agriculture is essential to our economy. According to the Arkansas Farm Bureau, agriculture provides $16 billion annually and one out of every six jobs in the State.

While the EPA and the U.S. Army Corps of Engineers have repeatedly offered verbal assurances that agriculture need not worry about the scope of the proposed definition of waters of the United States, farmers in Arkansas worry because of the actions of agencies, not their words.

For example, in 2014, the Corps took action against a Tennessee row crop farm determining that a field was considered waters of the U.S. Arkansas farmers worry that every day activities such as plowing and applying fertilizer and pesticides will subject them, just like our neighboring State of Tennessee, to Federal jurisdiction under the Clean Water Act.

While each of these rules would cause great harm to Arkansas on their own, the cumulative effect cannot be overStated. This Administration is intent on following an agenda that ignores the plain language passed by Congress and has created a perfect storm of Federal regulation that will result in economic disaster for Arkansas.

Arkansans believe in protecting our environment. We take great pride in being the natural State and take pride in supplying the world with food and growing jobs in our State.

I thank Chairman Lummis, Ranking Member Lawrence and other members of the committee for the opportunity to address you all today. I welcome your questions. Thank you.

[Prepared Statement of Ms. Rutledge follows:]

THE ATTORNEY GENERAL
STATE OF ARKANSAS
LESLIE RUTLEDGE

Chairwoman Lummis, Ranking Member Lawrence, members of the committee, thank you for inviting me to speak to this committee today. My name is Leslie Rutledge and I am the Attorney General of Arkansas. I am here today to give you a sense of how our state, one that has a rich natural heritage and is known across the nation as the Natural State for its rolling hills, dense woodlands, and miles of rivers and lakes, will be impacted by overreaching EPA regulations. Specifically, I will discuss how the EPA exceeds its legal authority in three recently proposed rules. The EPA's unsupported application of the law in its proposed Clean Power Plan, ground-level ozone standards and changes to the Clean Water Act definition of the Waters of the United States would produce broad, cumulative impacts that could cripple the economy of Arkansas, already one of the poorest in the country.

Clean Power Plan

As Attorney General, I represent the interests of Arkansas's utility ratepayers. These are hardworking Arkansans;

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some own their own small business, while others might maintain their family farm that has been passed down from one generation to the next. From Fayetteville to Warren, and Texarkana to Jonesboro, and all points in between, I have consistently heard great concern about the EPA's proposed Clean Power Plan.
The rule as proposed will require Arkansas to meet an almost 45% reduction in carbon emissions from electric generating units by 2030. This is the 6th highest rate of reduction in the nation, imposed upon a state that currently ranks 46th in per capita income. There can be no question that the proposed rule will have a huge impact on our state's utility rates, and these rate increases will disproportionally harm low income Arkansans. Additionally, these policy objectives will stifle job growth and limit Arkansas's ability to compete across the country and the globe - a concern for all of us during this time of still-sluggish growth, post-recession.

Over three million public comments were filed on this proposed rule, several from the State of Arkansas. Many in opposition discuss the technical deficiencies in the plan. See the list of relevant resources attached to this testimony for information about accessing more comments from Arkansas.

First, the proposed rule is unlawful because the EPA regulates coal-fired power plants, such as the one in the county where I was raised, under Section 112 of the Clean Air Act, not Section 111(d). In fact, the law cannot be any clearer - it specifically prohibits the EPA from invoking Section 111(d) where the "source category...is regulated under section [112]...." 42 U.S.C. § 7411(d)(1)(A)(i).

Second, even if Section 111(d) were applicable, the proposed rule is also improper because the EPA has not completed Section 111(b) "new source" regulation of carbon dioxide emission from coal-fired power plants. Under the law, there must be a performance standard for new sources prior to the development of a standard for existing sources. See 42 U.S.C. § 7411(d)(1)(a)(ii). Currently, the Section 111(b) rule for "new source" emissions has been proposed, but it has not been finalized.

Third, the proposed rule is a glaring example of the EPA's overreach into the management of states' energy generation and usage. Rather than addressing air pollution, which is the EPA's sole responsibility under the Clean Air Act, the proposed rule seems to attempt to impose the Obama Administration's preferred national energy policy which is clearly beyond the EPA's legal authority to act.

My opposition to the rule may beg the question as to whether I am for clean air? I certainly am, and I would say confidently that my fellow Arkansans are in favor of clean air, but this leads me to my next, and fourth, point.

The proposed rule mandates what each state *must* achieve, rather than what the EPA is actually authorized to do, which is to provide guidelines and appropriate procedures for states to use in establishing standards of performance for sources within their state. This proposed rule is a serious departure from the implementation of any other limits set under the Clean Air Act. The purpose of this proposed rule is unclear. Is this rule from the EPA about working cooperatively with the states and stakeholders to preserve clean air or is this rule established to force states into complying with a national energy policy to fit the needs of the current administration?

In addition to exceeding its legal authority, the EPA fails to recognize the cumulative impacts of all the pending air regulations. Other proposed rules under the Clean Air Act should be finalized prior to the adoption and implementation of the Clean Power Plan, to ensure that important economic decisions on the future of existing power plants can be made. Proposed changes to different air standards may affect both coal and natural gas fired units. Some units may be shut down, idled, or unable to generate an optimal amount of energy. Not only are power plants long-term investments, requiring serious economic review and decision-making, but any meaningful carbon regulation will be better developed after it is determined which power plants will remain after other clean air regulations are finalized.

Ozone Standards

In addition to regulating carbon through the Clean Power Plan, the EPA has proposed stricter ground level ozone standards. The Clean Air Act requires the EPA to review national ambient air quality standards every five years. The EPA set a standard for ground-level ozone in 2008, at a level of 75 parts per million. Through court order, the EPA was forced to review the standard which has resulted in the proposal of unnecessarily restrictive standards. The law does not require that the standard be lowered every time it is reviewed. If the standard is protective of the human health and the environment, it can remain unchanged. The standard of 75 parts per million should remain unchanged.

The EPA's proposed rule states that the agency is considering a standard somewhere between 65 and 70 parts per million, but it is also asking for comments regarding a standard as low as 60 parts per million or leaving the standard unchanged. Thus, the regulated community is left guessing whether the final rule will be a standard somewhere between 60 and 75 parts per million.

While that might not sound like much, the change would have a dramatic effect on the State of Arkansas. At 75 parts per million, only a small part of the state is not likely to meet the standard. At 60 parts per million, all of Arkansas would likely have trouble with attainment of the standard. Anyone who has ever been to Arkansas would be hard-pressed to believe that the beautiful Ozark and Ouachita Mountains, and the tourism industry based on their natural grandeur, have a smog problem. Nonattainment in the economic centers of Central Arkansas and Northwest Arkansas would cripple manufacturing and setback any economic recovery that we have achieved in the past few years. Plainly speaking, the EPA's belief that a review of the ozone standard means that the standard should be reduced will result in significant job losses in Arkansas which would destroy communities and educational opportunities for its citizens.

Waters of the United States

Likewise, the EPA's attempt to "clarify" the definition of "waters of the United States" under the Clean Water Act is so expansive that it could likely control land use activities over most of the United States. As Arkansas's Attorney General, this is a major concern for me, as this would drastically impact, among others, Arkansas's farmers and ranchers. At best, the proposed definition simply creates more confusion and litigation over federal jurisdiction under the Clean Water Act. At worst, the EPA and U.S. Army Corps of Engineers exert unfettered regulatory jurisdiction over areas that typically look more like land than water.

The new definitions of "significant nexus" and "tributary" are more complicated than tests applied under current law. Under current case law, the EPA and the Corps must determine whether there is a hydrological connection between the water body in question and a traditional navigable waterway. The definition of "significant nexus" in the proposed rule now requires the agencies to make multiple factual determinations before deciding if a waterbody - either alone or in combination with "similarly situated" waters - significantly affects a navigable waterway. But one determination that the agencies seem to overlook is the law's requirement that the nexus be "significant." Under the proposed rule, nearly any nexus to a traditional navigable waterway would be enough to establish jurisdiction under the Clean Water Act. This will invariably lead to a lengthy and expensive permitting process or litigation for the Arkansas agriculture community - the state's largest industry, which accounts for nearly one quarter of the state's economic activity.

Likewise, the proposed rule's definition of "tributary" introduces so many exceptions and qualifications that it fails to provide a clear and enforceable regulatory standard. The definitions of "significant nexus" and "tributary" are overly broad and contain so many factual components that they can hardly be called "definitions." As a result, the process for determining jurisdiction over a particular body of water becomes a maze for both regulators and the public to navigate.

As mentioned above, Arkansas's agricultural community would be left with increased uncertainty over the applicability of the Clean Water Act. Agriculture is essential to our economy. According to the Arkansas Farm Bureau, agriculture provides $16 billion annually and one out of every six jobs in the state. While the EPA and the Corps have repeatedly offered verbal assurances that agriculture need not worry about the scope of the proposed definition of "waters of the United States," farmers in Arkansas are worried because of the actions of the agencies, not their words. In 2014, the Corps took action against a Tennessee row crop farm and found part of the farm field to be "waters of the United States" because the area contained features such as a bed, bank and high water mark that made it a tributary to an adjacent water of the United States. Arkansas farmers worry that everyday activities, such as plowing and the appropriate application of pesticides and fertilizer, will subject them to federal jurisdiction under the Clean Water Act like the farmer from the neighboring state mentioned above. Compliance with such a regulatory scheme would be a lengthy and expensive process, which puts the safe and affordable food supply that Americans enjoy at risk.

Conclusion

While each of these rules would cause great harm to Arkansas on its own, the cumulative effect cannot be overstated. For example, if compliance with the Clean Power Plan requires the construction of new electric infrastructure, the proposed changes to the Clean Water Act could hinder the acquisition of permits for constructing the infrastructure. Likewise, the National Association of Manufacturers estimates that one-third of power plants that remain online after compliance with the Clean Power Plan would need to be shuttered to comply with the ozone standard because there is no technology available to meet the stricter standards.

And while this hearing focuses on EPA regulations, the Fish and Wildlife Service has simultaneously proposed new regulations that exceed the authority of the Endangered Species Act. Any activities undertaken in compliance with the Clean Air Act and the Clean Water Act must also comply with the Endangered Species Act. As the Arkansas Electric Cooperatives recently learned when building a short, five-mile transmission line, the federal agencies may be in conflict and navigating the regulatory maze can prove difficult for the federal government as well as stakeholders and citizens required to comply, resulting in a significant delay of a project.

In short, the Obama Administration is intent on following an agenda that ignores the plain language of the laws passed by Congress and has created a perfect storm of federal regulations that will result in economic disaster for a state such as Arkansas. Arkansans believe in protecting our environment and we take great pride in being the Natural State, but we also take pride in supplying the world with food and in our growing manufacturing sector. The EPA regulations that go beyond the scope of the authority granted to them by Congress are not only unlawful, but also unnecessary and harmful to our communities.

I want to thank the Committee once again for inviting me today to speak to you and for your time and consideration of this issue that is very important to me. I am happy to answer any questions that you may have.

List of Relevant Resources

Clean Power Plan

Rule Portal: www.regulations.gov; docket number: EPA-HQ-OAR-2013-0602 (http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OAR-2013-0602)

Comments from Arkansas (documents may be retrieved by entering these numbers at the above website):

Governor Hutchinson: EPA-HQ-OAR-2013-0602-22957
Sen. John Boozman, Arkansas, United States Senate: EPA-HQ-OAR-2013-0602-24267
Arkansas Department of Environmental Quality/Arkansas Public Service Commission: EPA-HQ-OAR-2013-0602-22736
Arkansas Attorney General's Office: EPA-HQ-OAR-2013-0602-23349
Arkansas State Chamber of Commerce/Associated Industries of Arkansas: EPA-HQ-OAR-2013-0602-29696; EPA-HQ-OAR-2013-0602-23071
Arkansas Electric Cooperatives Corporation: EPA-HQ-OAR-2013-0602-22812
Arkansas Electric Energy Consumers/Arkansas Gas Consumers: EPA-HQ-OAR-2013-0602-24251
American Electric Power (AEP): EPA-HQ-OAR-2013-0602-24030
Entergy Corporation: EPA-HQ-OAR-2013-0602-22874
Mass comment from SWEPCO employees: EPA-HQ-OAR-2013-0602-33187

Waters of the United States

Rule Portal: www.regulations.gov; docket number: EPA-HQ-OW-2011-0880
(http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OW-2011-0880)

Sen. Missy Thomas Irvin, Assistant Pro Tempore, The Senate, Arkansas: EPA-HQ-OW-2011-0880-17000
Arkansas Attorney General's Office: EPA-HQ-OW-2011-0880-16899
Arkansas Farm Bureau: EPA-HQ-OW-2011-0880-15145
Arkansas Agricultural Council: EPA-HQ-OW-2011-0880-7092
National Pork Producers, et al.: EPA-HQ-OW-2011-0880-1433
Arkansas Electric Cooperative Corporation: EPA-HQ-OW-2011-0880-16579
American Electric Power (AEP): EPA-HQ-OW-2011-0880-15079
Beaver Water District: EPA-HQ-OW-2011-0880-15405

National Ambient Air Quality Standards for ground-level ozone
Rule Portal: www.regulations.gov; docket number: EPA-HQ-OAR-2008-0699
(http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OAR-2008-0699)
Comment period ends March 17, 2015

Arkansas-specific information from the National Association of Manufacturers

(Economic Data) http://www.nam.org/Issues/Energy-and-Environment/Ozone-Regulations/State-Ozone-Impact/Impact-of-Ozone-Regulations-on-Arkansas-%282014%29/

(Nonattainment Data) http://www.nam.org/Issues/Energy-and-Environment/Ozone-Regulations/State-Overview/EPA-Regulations-Will-Stifle-Manufacturing-Growth-in-Arkansas-%282013%29/

Ms. LUMMIS. Thank you, Attorney General Rutledge.

Before I recognize Dr. Smith, it appears we may be interrupted by votes. We will hear the entirety of Dr. Smith's opening Statement for 5 minutes. If votes have been called, then we will take a break for about 25 minutes while the members of the committee vote and return to hear the opening Statements of Drs. Harrison and Tierney.

With that, Dr. Smith, you are recognized for 5 minutes.

STATEMENT OF ANNE E. SMITH

Ms. SMITH. Thank you, Chairwoman Lummis, Ranking Member Lawrence and other members of the committee. Thank you for the invitation to speak at this hearing.

I am Anne Smith of NERA Economic Consulting. My testimony today is my own and does not represent the position of my company or any of my clients.

This hearing is about the impacts of EPA regulations. I will address some insights and issues about the comparisons of the benefits and the costs of two major regulations EPA is presently proposing.

The first, the Clean Power Plan, is to reduce electricity sector emissions of carbon dioxide. The other is a tightening of the ozone national ambient air quality standard, NAAQS.

My colleague to my left, Dr. Harrison, will be testifying on high costs of these regulations and analyses we have done together at NERA. I agree with all that he will have to say.

I am going to focus on EPA's own estimates of the benefits of these two rules and how they compare to costs. For these comparisons, I will only use EPA's own lower cost estimates.

My bottom line is that EPA's analyses of both rules offer a far weaker case that the benefits of those rules will exceed their costs than one would believe from listening to EPA's press releases or reading the regulatory impact analyses.

First, for the Clean Power Plan, EPA's comparisons of the costs and benefits of the CPP falsely suggest that climate benefits will exceed costs during the period of implementation, 2020 to 2030.

When correctly presented, EPA's own estimates reveal that it finds the CPP will cost more than $180 billion by 2030, in present value terms and that the present value of its cumulative climate benefits are not expected to exceed that $180 billion of cost until more than 100 years later.

Furthermore, EPA's estimates of those climate benefits are global benefits, all countries of the world and the benefits to the U.S., including future U.S. generations, not just current U.S. generations, are not expected to exceed that rule's costs, even under the most pessimistic projections of potential climate impacts that EPA is using in its regulatory impact analysis.

I will now turn to the proposed ozone NAAQS revision. At tightening of the current ozone NAAQS could be much more expensive than the proposed Clean Power Plan. Yet, for this rule, EPA does not estimate this rule's ozone-related benefits will exceed its costs, even using EPA's own cost estimates.

How then can EPA claim that the benefits of the ozone NAAQS will "outweigh it's cost by as much as three to one?" The answer is, they pad the benefits estimates with so-called co-benefits. Co-benefits are estimates of benefits based on projections of coincidental changes in a completely different pollutant than ozone, a completely different pollutant than the target of the regulation.

These are coincidental reductions projected to occur in fine particulate matter, PM2.5, which are the subject of their own regulatory coverage under NAAQS.

EPA has a long tradition of making rules appear to have benefits that exceed their costs by adding such massive doses of co-benefits from PM2.5. In fact, these co-benefits also appear in the benefit cost analysis for the CPP, the climate rule we are talking about.

The thousands of premature deaths and the hundreds of thousands of avoided asthma attacks that EPA has claimed for that climate rule are based on PM2.5 co-benefits. They have nothing to do with climate benefit estimates whatsoever.

I have written and testified previously on the problems with what I have called EPA's co-benefits habit. I reference the writing of that discussed in my written testimony.

To summarize briefly, even the Administrator s Statements about the health benefits of PM2.5 imply that these co-benefits may not exist at all. That is because they are based on changes in PM2.5 concentrations that are already below the protected level of the PM2.5 ambient air quality standard.

But, even if they did exist, they should not be used to promote regulations that have nothing to do with PM2.5 such as these two EPA proposals I have talked about which are intended not to reduce PM2.5 but to deal with climate impacts and ozone exposures.

Using co-benefits in this way is a recipe for creating economically inefficient policies for managing those purported risks of PM2.5 while it also misleads the public on the need for more costly regulations of these other two pollutants.

Thank you very much for your attention. I will answer questions later if you are interested.

[Prepared Statement of Ms. Smith follows:]

Prepared Statement of
Anne E. Smith, Ph.D.
at a Hearing on
Impacts of U.S. Environmental Protection Agency Regulations
by the
Committee on Oversight and Government Reform
United States House of Representatives
Washington, DC

February 26, 2015

Mr. Chairman and Members of the Committee:

Thank you for your invitation to participate in today's hearing. I am Anne E. Smith, a Senior Vice President of NERA Economic Consulting. I am also co-head of NERA's global environmental practice with Dr. David Harrison.

I am a specialist in environmental risk assessment and economic impact analyses to support environmental policy decisions. I have performed air quality cost and benefits analyses and risk assessments over my entire career, including as an economist in the Office of Policy, Planning, and Evaluation of the U.S. Environmental Protection Agency (USEPA), as a consultant to the USEPA, and in many consulting engagements since then for government and private sector clients globally. I also have served on several committees of the National Academy of Sciences focusing on risk assessment and risk-based decision making, and on advisory boards of the USEPA.

Specific air quality issues I have analyzed include greenhouse gases, fine particulate matter ($PM_{2.5}$), ozone, mercury, regional haze, and others. I have been involved extensively in assessment of the evidence on risks from ambient $PM_{2.5}$ and ozone for twenty years, and have performed analyses of the impacts of climate change and climate policies for even longer.

I hold a Ph.D. in Economics from Stanford University, with a Ph.D. minor in Stanford's School of Engineering, a M.A. in Economics from Stanford University and a B.A. in Economics from Duke University, *summa cum laude*.

I thank you for the opportunity to share my perspective today on the benefits and costs of major proposed rulemakings of the USEPA. My written and oral testimonies reflect my own opinions, and do not represent any position of my company, NERA Economic Consulting, or of any of its clients.

My colleague, Dr. David Harrison, is also submitting testimony in this hearing that summarizes analyses on which we have collaborated regarding the costs and economic impacts of two major regulations that USEPA is presently proposing: the proposed Clean Power Plan (CPP)[1] and the proposed tightening of the national ambient air quality standard (NAAQS) for ozone.[2] USEPA's own analyses indicate that both of these rules will have significant costs; we agree but, as Dr. Harrison testifies, we find that these rules have the potential to be far more costly than USEPA reports. In my testimony, I turn to the issue of what USEPA has reported as the potential benefits of these proposed rules, and explain why I conclude that USEPA's benefit and net benefit estimates are overstated and misleading.

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[1] 79 *Fed. Reg.* 34830, June 18, 2014.

[2] 79 *Fed. Reg.* 75233, December 17, 2014.

Synopsis of Key Points in My Testimony

- USEPA's comparisons of costs and benefits of the proposed CPP are presented in a very misleading manner, falsely suggesting climate benefits will exceed costs in the period 2020-2030.
- When correctly presented, USEPA's estimates indicate the present value of CPP spending through 2030 will exceed $180 billion while climate benefits are not expected to exceed that cost until about 100 to 125 years after the spending has been sunk.
- The CPP's estimated benefits to U.S. populations is not expected to exceed the CPP's costs under even the most pessimistic projections of climate impacts.
- The proposed ozone NAAQS is likely to be much more expensive than the proposed CPP, yet USEPA does not project that its ozone-related benefits will ever exceed its costs.
- USEPA has claimed that both of these proposed air rules will produce benefits far in excess of their costs, but in both cases, those statements are based on projected coincidental changes (so-called "co-benefits") in a completely different pollutant that is not the target of these regulations – $PM_{2.5}$.
- To make its estimates of $PM_{2.5}$ co-benefits, USEPA uses assumptions that are inconsistent with the Administrator's own stated conclusions about that pollutant's health effects. The Administrator's conclusions imply that the co-benefits estimates in the RIAs are vastly overstated, and may be nearly zero.
- Estimates of co-benefits of an already regulated pollutant such as $PM_{2.5}$, even if they were trustworthy, should not provide the justification for regulations of different pollutants. That is a recipe for creating an unnecessarily complex web of air regulations that can only lead to economically-inefficient management of the public health.

1. Misleading Comparisons of Benefits and Costs in the RIA for the Proposed Clean Power Plan

The regulatory impact analysis (RIA) of the proposed CPP[3] contains estimates of climate-related benefits from the reduction in CO_2 emissions. These estimates are made by multiplying the number of tons of reduction of CO_2 predicted to occur under the CPP by a "social cost of carbon" (SCC) estimate. The Federal SCC estimates are supposed to reflect the present value of the monetized global benefits over a 300-year period into the future due to a reduction of one metric ton of CO_2.[4] It is stated in dollars per ton ($/ton). Estimates of the SCC vary enormously with the choice of discount rate that is used when calculating the SCC. The $/ton SCC estimates that USEPA uses vary by a factor of more than five when moving from a 2.5% discount rate to a 5% discount rate. The range would exceed a factor of ten if discount rates recommended in RIA guidance were to be used.[5]

This high sensitivity to the choice of discount rate is a strong indicator that a very large portion of the SCC's value comes from changes in climate impact that are many decades in the future. It also highlights a significant conceptual flaw in the way USEPA is using the SCC in its comparisons to costs of a regulation. That is, the SCC produces a present value of benefits, while the RIA compares those benefits estimates to costs that are stated in annualized terms, and makes the comparison for just three individual years. This creates a significant overstatement of the apparent net benefits of the rule, as I explain below.[6]

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[3] USEPA, *Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants*. EPA-542/R-14-002, June 2014. (Hereafter, the "CPP RIA".)

[4] Interagency Working Group of U.S. Government on Social Cost of Carbon. *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866*, February, 2010. (Available: http://www.epa.gov/oms/climate/regulations/scc-tsd.pdf.)

[5] The Office of Management and Budget's guidance for preparing RIAs, known as "Circular A-4," calls for use of a 3% and 7% discount rate. I have done my own replications of the Federal SCC values and find that if an SCC value using 7% were to be included, it would be more than a factor of 10 less than the SCC for the 3% discount rate.

The RIA provides estimates of net benefits for each of three years during the rule's implementation phase (2020, 2025, and 2030), based on a "slice in time" method in which costs in each of those years are compared to benefits in each of those years. Doing this, the RIA concludes that the CPP's net benefits will be large and positive. For example, for the proposed "Option 1", and using a 3% discount rate for climate and co-benefits, USEPA suggests that benefits will exceed the regulation's costs by between $27 billion and $50 billion in 2020, and increase to a range of $48 billion to $84 billion by 2030.[7] Approximately half of the benefits in these calculations are from "co-benefits" from coincidental reductions projected in ambient $PM_{2.5}$. These are highly problematic and inappropriate to include in the RIA, as I will explain in Section 3. However, even if one ignores the co-benefits in these tables (which I will return to in Section 3), and considers only the climate-related benefits, the net benefits implied by the RIA are about $11 billion in 2020, and rise to about $22 billion by 2030 (still using the 3% discount rate). These estimates are misleading as I explain in the rest of this section.

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[6] A more complete exposition of my points regarding the CPP benefits and benefit-cost comparison in the RIA is in my technical report prepared on behalf of the Texas Commission on Environmental Quality (TCEQ), which is available in the CPP docket as Attachment 1 at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2013-0602-23305.

[7] RIA, pp. ES-21 to ES-23.

1.a. A Corrected Comparison of CPP's Costs and Climate Benefits

The net climate benefits in the CPP's RIA summarized above are misleading because they compare a present value for the climate benefits to a single year's portion of the costs of the policy. An appropriate assessment of a major regulation's net benefits should compare present values to present values. Also, when the timing of the spending of an investment is substantially different from the timing of its return (*i.e.*, the benefits) one should provide an assessment of the payback period. I did such an analysis using USEPA's own cost and climate benefits data, and following is the very different story that emerges:[8]

- EPA's estimates of the costs of the CPP vastly exceed its estimates of the climate benefits in the specific years 2020, 2025 and 2030. For example:
    - Benefits estimated to occur in 2020 will be less than $0.1 billion globally, compared to U.S. CPP compliance spending during 2020 of $21 billion.
    - Estimated benefits in 2030 will be in the range of $1.0 to 1.4 billion globally, while U.S. compliance spending in that year is projected to be $11 billion.
- By 2030, the U.S. will have spent approximately $182 billion to comply with the CPP, yet the present value of climate benefits that will have accumulated by that time (globally) are estimated to be only $3.5 to 4.6 billion.
- Even by 2050, the estimated global benefits from the spending through 2030 are projected to be less than $36 billion, at a point when all $182 billion of costs has been expended.
- Because there are such small expected climate benefits until long after the compliance spending is sunk, the present value of accumulated net benefits does not become positive until sometime between 2131 and 2155. This implies a

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[8] All of the following comparisons use the 3% discount rate for the SCC values. My report for TCEQ (see footnote 6) provides results for the other Federal SCC values and discount rates.

payback period of 100 to 125 years on a societal investment about $200 billion dollars. That is, the global societal return on the CPP investment will still be negative more than a century after the regulation has been completely implemented.

- The ultimate present value of global benefits eventually accumulates to $214 billion, which is only $32 billion higher than the present value of costs ($182 billion). This implies an internal rate of return of less than one-tenth of one percent per year even 250 years after the $182 billion investment in the CPP has been made.

The above calculations make it clear that the RIA's "slice in time" approach that indicates net benefits of $11 billion in 2020, and rising to $22 billion by 2030 is a very misleading way to describe the benefits and costs of a climate policy. USEPA's estimates of those climate benefits are actually projected to materialize decades to centuries in the future, whereas the RIA creates a false impression that those reductions in climate impacts are imminent and large. In fact, the CPP represents a very significant near-term spending program that has a highly uncertain long-term pay-off. The one point on which *all* the various estimates of SCC agree is that potential benefits from avoided climate damages will occur many decades after the spending has been sunk.[9]

Figure 1 presents the estimates of the timing and magnitude of USEPA's estimates of spending for the CPP (blue bars) with the timing and magnitude of the estimates of climate-related benefits (red bars) for the 3% discount rate case summarized in the bullets above. Again, these estimates are based entirely on USEPA's own cost and benefit estimates. The only thing I have done differently from USEPA has been to place both the cost and the benefits estimates in their respective years, and account for the additional years in the period 2017-2300.

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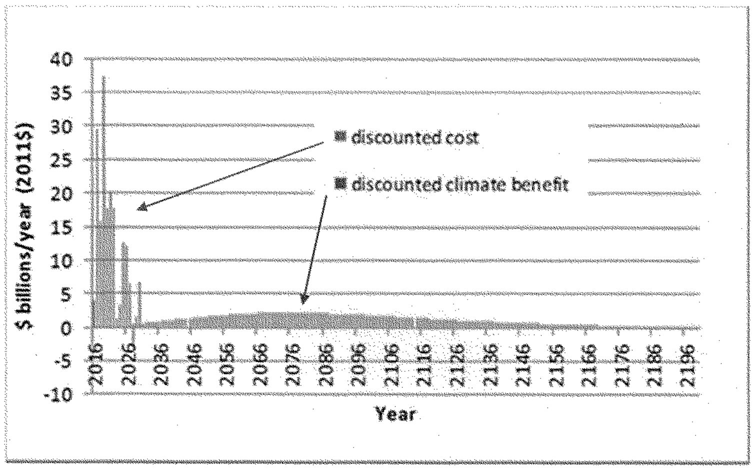
[9] For example, even using the 95th percentile pessimistic SCC values, the policy's benefits would not exceed the costs until about 40 years after the spending is completed. (See Figure C-5 of my report for TCEQ cited in footnote 6.)

Figure 1. Present Value of Spending (blue) and Climate Benefits (red) by Year ($ billions per year, 2011$, using 3% discount rate)



1.b. U.S. Climate Benefits of CPP Do Not Exceed the CPP's U.S. Costs

An important limitation of the benefit-cost case above is that the values for the SCC are for *global* benefits, even though all of the costs of the regulation will be borne by the U.S. alone. However, it is standard procedure in benefit-cost analysis of a domestic program to focus on a comparison of the domestic benefits to that program's costs. The Technical Support Document for the derivation of the SCC $/ton estimates notes if an SCC were to reflect only domestic benefits from reducing U.S. emissions, it may be between 7% and 23% of the SCC values that USEPA has used.[10] This indicates that the climate benefits that will be gained by U.S. populations (now and in the future) are so much smaller that even the highest set of suggested Federal SCC values would not result in net domestic benefits greater than zero for the U.S., even by the year 2300. That is, using the worst case (95th percentile) SCC and assuming at the high end that domestic damages are 23% of those estimated global damages, the net benefits of the CPP will be negative even through 2300. The RIA should present these facts to its readers but does not.

1.c. Additional Concerns with USEPA's Estimates of CPP Costs and Climate Benefits

Individuals familiar with USEPA's cost estimates may notice that I stated in the bullets above that the CPP spending in 2020 will be $21 billion, whereas the RIA states that spending in 2020 will be $7.5 billion. The $21 billion estimate is in fact USEPA's cost estimate for actual spending in that year, which can be found by reviewing the USEPA's spreadsheets that it provides as technical support documents to the RIA. The costs inserted into the RIA's cost tables for the years 2020, 2025 and 2030 have inappropriately annualized the spending on energy efficiency programs projected to be spend in those three years – even though these costs are not annualized by the utility companies that pay for them.[11] By annualizing that large part of the CPP's costs, they were pushed off into years beyond 2030. This is inappropriate in a societal cost analysis because it is inconsistent with when society will actually have to incur the capital spending. It is particularly inappropriate for a benefit-cost analysis when the full present value of the benefits *have* been assigned to that year. My analysis summarized above has made this correction, to provide a proper "apples to apples" comparison of benefits and costs of the CPP.

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[10] Interagency Working Group of U.S. Government on Social Cost of Carbon. *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866*, February, 2010, p. 11. (Available: http://www.epa.gov/oms/climate/regulations/scc-tsd.pdf.)

[11] Explanation of how this can be found in USEPA technical support documents for its cost estimates is explained in Appendix A of my report for TCEQ referenced in footnote 6. One can also observe in the USEPA spreadsheets that USEPA did use the full (not annualized) costs to calculate the electricity rate impacts also reported the CPP RIA.

As Dr. Harrison explains in his testimony, NERA has made its own estimates of the costs of the CPP. Our estimates are substantially higher than USEPA's.[12] I have not used any of NERA's cost estimates of the CPP in the above benefit-cost comparisons. I note, however, that the above estimates of present values of net benefits would be lower and the payback periods longer, if I were to have used NERA's own estimates.

2. Costs of the Proposed Ozone NAAQS Alternatives Exceed Their Ozone-Related Benefits

Another major rule currently being proposed by USEPA is to tighten the current ozone NAAQS of 75 ppb to a level in the range of 65 to 70 ppb. Even by USEPA's analysis, this ozone rule could be more costly than the proposed CPP. For example, USEPA estimates in the current RIA for the proposed ozone NAAQS[13] that the 60 ppb NAAQS alternative could cost about $40 billion per year. The benefit-cost case for this rule, however, is even weaker than for the CPP. This is true even using USEPA's current RIA data, but the case is even weaker when underestimates that EPA introduced into this current RIA's costs estimates are considered.

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[12] My analysis for TCEQ finds that the present value (through 2030) of EPA's CPP cost estimate for Option 1 is $182 billion (see Appendix A, p. 28); NERA's analysis finds that Option 1 of the CPP will cost over $350 billion (see Table 5 of testimony of Dr. Harrison, February 26, 2015).

[13] USEPA, *Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone,* EPA-452/P-14-006, Office of Air and Radiation, Research Triangle Park, NC, November 2014. Available: http://www.epa.gov/ttnecas1/regdata/RIAs/20141125ria.pdf. (Hereafter, the "Ozone NAAQS RIA".)

2.a. How USEPA Has Reduced Its Ozone Cost Estimates since the Last Ozone RIA

This same set of alternative ozone NAAQS levels were evaluated by USEPA in a rulemaking ending in 2008, and in a reconsideration initiated in 2010. USEPA provided estimates of the cost of attaining these same alternative NAAQS in RIAs released then.[14] In the earlier RIAs, USEPA estimated that the 60 ppb alternative could cost as much as $90 billion per year, compared to about $40 billion per year in the current ozone RIA. The costs for the 65 ppb and 70 ppb standards have similarly declined in the current RIA.

This is illustrated in the sets of two red bars in Figure 2.[15] The red bar on the right for each alternative NAAQS level reflects the costs of that rule estimated in the 2010 RIA. The red bar on the left for each alternative NAAQS shows the costs that USEPA now estimates for the same standard. Many people have asked what accounts for this large reduction in the cost estimates. Although many changes in regulations, baselines, and air quality modeling have occurred between the 2010 RIA and the current RIA, NERA has found that *almost all of the reduction in the costs in the current RIA can be*

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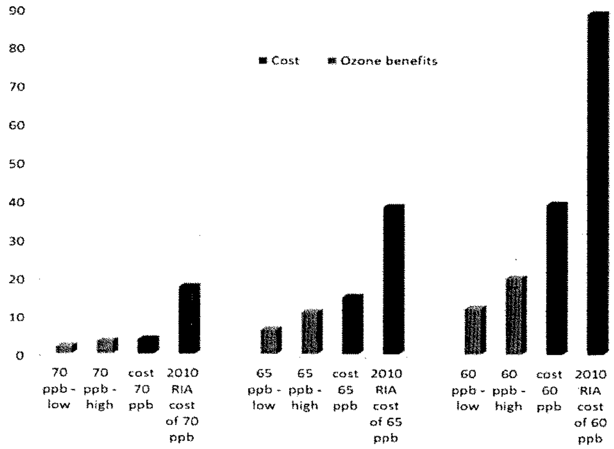
[14] USEPA. *Summary of the updated Regulatory Impact Analysis (RIA) for the Reconsideration of the 2008 Ozone National Ambient Air Quality Standard (NAAQS).* January 2010. Available at: http://www.epa.gov/ttnecas1/regdata/RIAs/s1-supplemental_analysis_full.pdf.

[15] If viewing these figures in black and white, the red bars are the two rightmost bars in each set of four bars, and are labeled "cost" beneath the bar, along with an indication of which alternative NAAQS level and from which ozone NAAQS RIA (*i.e.*, from the current RIA, or from the 2010 RIA).

traced to a change in USEPA's assumption about the cost per ton to reduce the very large share of emissions that USEPA calls the "unknown" control actions.

Figure 2. Comparison of Estimates of Ozone Benefits and Costs for 3 Alternative Ozone NAAQS (Source: Ozone NAAQS RIA, Tables ES-6 and 5-1)



What are "unknown controls"? They make up the portion of total reductions in ozone precursor emissions that USEPA has determined need to be removed for attainment to occur, but which USEPA has declined to attempt to identify in its RIA. Obviously, the cost for this set of actions is highly uncertain, but as long as the control actions are left unidentified, it is very difficult to challenge any estimate that USEPA may choose to provide for this estimate. However, there is some basic logic that can be applied to determine whether any given estimate is realistic, and we find that the current estimates are less realistic than USEPA's earlier ones.

For example, the list of controls that EPA *has* identified is insufficient even to attain the least stringent alternative of 70 ppb. However, because the number of tons of reduction needed to achieve each incrementally tighter standard increases, the fraction of controls that USEPA treats as "unknown" rises with more stringent alternative NAAQS levels. In the case of the 65 ppb NAAQS, approximately half of the needed reductions in emissions are left unidentified by USEPA. It is a matter of intuition (and economic reality) that reductions that cannot be identified in a cost analysis probably become increasingly more costly than those that can more readily be identified.

In its 2008 and 2010 RIAs, USEPA made efforts to roughly approximate this increasing cost per ton; in the current RIA, however, USEPA has simply assumed that all of those unknown control measures will be available at an average of only $15,000 per ton – no matter how deeply one has to cut back on total baseline emissions. NERA staff have performed calculation replicating USEPA's cost estimates and we have found that if one simply replaces the current RIA's flat $15,000 per ton for the "unknown" reductions with the same upward-sloping cost per ton assumption that USEPA used in its two prior ozone RIAs, *the estimated costs for the alternative rules today will be essentially the same as they were before.*

As we find no good reason in USEPA's RIA to make a more simplistic assumption than it made in 2008 and in 2010, the higher earlier costs (the red bars on the right in Figure 2) should not be treated as outdated, and should be viewed as more realistic.

As Dr. Harrison explains in his testimony for this hearing, NERA has made a more evidence-based study to identify what these "unknown" control actions would have to comprise and to then make estimates of those actions' costs. That analysis finds that even the earlier higher USEPA cost estimates shown in Figure 2 are potentially vastly understated. Where USEPA is suggesting that a tighter ozone standard may cost tens of billions of dollars per year, NERA's more evidence-based cost estimates are hundreds of billions of dollars per year.

2.b. USEPA's Estimates of Ozone Benefits Are Less than the Ozone NAAQS Costs

Figure 2 also graphs the RIA's estimated range of ozone-related benefits next to the RIA's estimates of the cost, for each alternative standard included in the RIA. It shows that the USEPA's estimates of the ozone-related benefits of those alternative potential NAAQS levels cannot match its estimates of their costs. A range of ozone-related benefits estimates is provided in the current RIA, with annual values as shown by the two blue bars shown in Figure 2 for each of the three alternative NAAQS levels analysed. Only if the highest of the benefit estimates is compared to the current RIA's cost estimate does one alternative standard -- the least stringent alternative of a 70 ppb NAAQS -- potentially have a breakeven level of net benefit. When the more realistic earlier cost estimates are compared to the RIA's ozone benefits, even the 70 ppb alternative NAAQS is found to have ozone-related benefits far less than its costs.

One might then ask, why does the USEPA press release for this proposed rule claims large net benefits, as quoted below:

> *EPA estimates that the benefits of meeting the proposed standards will significantly outweigh the costs. If the standards are finalized, every dollar we invest to meet them will return up to three dollars in health benefits.*[16]

The answer is the use of estimates of "co-benefits" from another pollutant altogether, $PM_{2.5}$. While the CPP RIA uses co-benefits from criteria pollutants to bolster its rather weak benefit-cost case from its climate-related benefits, the ozone NAAQS RIA's benefit-cost case depends entirely on an appeal to co-benefits. The role of co-benefits in both of these rules is discussed in Section 3, providing reasons to expect that all such co-benefits are being overstated, and in a manner that is inconsistent with the judgments of the USEPA Administrator about where to set a NAAQS.

3. Problems with Use of "Co-Benefits" in the RIAs for the Proposed CPP and Ozone NAAQS

The proposed ozone NAAQS RIA includes large numbers of co-benefits from coincidental reductions in ambient $PM_{2.5}$ that it projects will result when reducing NO_x emissions to reduce ozone. As with the proposed CPP RIA, these co-benefits are larger than the estimates of the ozone NAAQS's actual own direct (*i.e.*, ozone-related) benefits. Figure 3 adds the ozone NAAQS RIA's estimates of co-benefits from $PM_{2.5}$ to Figure 2 (*i.e.*, co-benefits are shown as the grey portions of the benefits bars, stacked on top of the blue bars from Figure 2 that show the ozone benefits). As Figure 3 shows, the co-benefits estimates in the ozone NAAQS RIA are much larger than the ozone rule's estimated ozone benefits. Only when the co-benefits are included in the analysis do the benefits of the alternative ozone NAAQS levels appear to exceed their costs, even when accepting the much lower cost estimates in the current ozone NAAQS RIA.[17]

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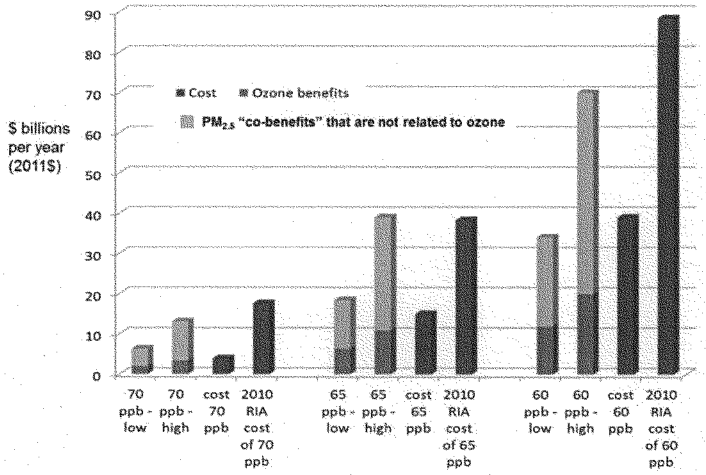
[16] USEPA, "EPA Proposes Smog Standards to Safeguard Americans from Air Pollution," press release, November 26, 2014. Available: http://yosemite.epa.gov/opa/admpress.nsf/596e17d7cac720848525781f0043629e/6ce92be958c8149285257d9c0049562e!OpenDocument.

Figure 3. Comparison of Benefits and Costs in USEPA's Ozone NAAQS RIA with PM2.5 Co-Benefits Included (Source: Ozone NAAQS RIA, Tables ES-6 and 5-1)



As I noted in Section 1, the CPP RIA also makes a case that the rule will have near-term benefits exceeding its costs due to estimated benefits that have nothing to do with climate change. These are the co-benefits estimated to be derived from coincidental reductions in the criteria pollutant levels of $PM_{2.5}$ and ozone.[18] According to the CPP

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[17] As Dr. Harrison explains in his testimony for this same hearing, all of these ozone NAAQS cost estimates are understated in a very significant degree. If the more evidence-based costs estimates that NERA has produced were to be used, none of the alternative ozone NAAQS options would have benefits exceeding their costs, *even if the $PM_{2.5}$ co-benefits are included.* (NERA's more evidence-based cost estimates are discussed in Dr. Harrison's testimony, and the results for a 60 ppb alternative NAAQS are found in our July 2014 report at http://www.nera.com/publications/archive/2014/assessing-economic-impacts-of-a-stricter-national-ambient-air-qu.html.)

[18] Such coincidental reductions may occur if there is less coal-fired generation as a result of efforts to limit CO_2 under the CPP – the reduced generation is also likely to reduce NO_x and SO_2 emissions that are

RIA, co-benefits from Option 1 are estimated to range from $16 billion to $40 billion in 2020 and rise to the range of $25 billion to $62 billion by 2030.[19] These co-benefits estimates exceed the estimated cost of the CPP, and might tempt some people to argue that the CPP is justified on the basis of these co-benefits alone. (Doing so might allow one to thereby sidestep discussions about the weakness that I described in Section 1 of the benefit-cost case for the CPP based on its climate benefits.) In fact, emphasizing the co-benefits instead of the climate benefits is pretty much what USEPA is doing when it claims that the CPP will save hundreds of lives per year and myriad other health benefits. For example, USEPA's Fact Sheet for the CPP states:

> ***Americans will see billions of dollars in public health and climate benefits, now and for future generations.***
> *The Clean Power Plan will lead to climate and health benefits worth an estimated $55 billion to $93 billion in 2030, including avoiding 2,700 to 6,600 premature deaths and 140,000 to 150,000 asthma attacks in children.*[20]

The claimed "climate and health benefits" in the above quote from USEPA have *nothing to do with reduced climate change at all* – they are entirely due to estimated co-benefits from reductions in ambient $PM_{2.5}$ and ozone that USEPA has estimated will occur as a result of meeting the CPP's CO_2 targets.

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precursors to the formation of ambient $PM_{2.5}$ and ozone (in the case of NO_x). Where exactly these reductions will occur geographically, and by how much, are more uncertain than whether less coal-fired generation will result in such reductions. However, sound estimates of potential co-benefits would take into account where and how much, not just whether.

[19] Tables ES-8 to ES-10 in CPP RIA, pp. ES-21 to ES-23.

[20] http://www2.epa.gov/carbon-pollution-standards/fact-sheet-clean-power-plan-overview. Emphasis in original.

There are good reasons why the estimates of co-benefits in both the proposed CPP and proposed ozone NAAQS RIAs should be viewed as overstated. There are also reasons why estimates of co-benefits from already-regulated pollutants such as the criteria pollutants should not be included in an RIA. I summarize my reasons in the rest of this section, while a more thorough discussion and analysis is available in papers that I refer interested readers to also read.[21]

3.a. The Overstatement in USEPA's Co-Benefits Estimates.

All of the estimated health co-benefits in these two proposed rule RIAs are associated with minor reductions in ambient concentrations of criteria pollutants that are already subject to their own Federal health standards -- *i.e.*, their respective NAAQS. Each NAAQS must be set at a level that protects the public health from each criteria pollutant with an adequate margin of safety. Although a health-based NAAQS is not considered to be free of any remaining health risk, it *is* considered to be stringent enough that USEPA lacks confidence that statistical associations between health and pollutant levels continue to exist at lower levels.

The USEPA Administrator's articulation of this lack of confidence can be found in the preambles for both the current $PM_{2.5}$ and the current ozone NAAQS.[22]

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[21] Smith, AE. *An Evaluation of the $PM_{2.5}$ Health Benefits Estimates in Regulatory Impact Analyses for Recent Air Regulations*, prepared for the Utility Air Regulatory Group, December, 2011 (available: http://www.nera.com/publications/archive/2011/an-evaluation-of-the-pm25-health-benefits-estimates-in-regulato.html); Smith, AE. "Inconsistencies in Risk Analyses for Ambient Air Pollutant Regulations," manuscript submitted to *Risk Analysis* (accepted for publication with revisions), 2014. Copy of manuscript available from author on request.

[22] See 78 *Fed. Reg.* 3086, January 15, 2013 for the $PM_{2.5}$ NAAQS rationale, and 76 *Fed. Reg.* 16436, March 27, 2008 for the ozone NAAQS rationale. For example, in 78 *Fed. Reg.* 3086 at 3139: "In reaching decisions on alternative standard levels to propose, the Administrator judged that it was most

Essentially all of the co-benefits estimates are due to projected changes in $PM_{2.5}$ and ozone in areas already attaining their health-based NAAQS. These are the very conditions under which the Administrator has stated he/she has no confidence that the health-pollutant relationships continue to exist; however, these co-benefits estimates are made by assuming 100% certainty in the continued existence of those relationships. This is outright logical inconsistency; if the Administrator has properly set those NAAQS, all of these co-benefits estimates are, at best, major overstatements.[23]

Further, USEPA's estimates of $PM_{2.5}$ benefits are predicated on a presumption that the statistical ("epidemiological") associations between chronic ambient $PM_{2.5}$ concentrations and mortality risk are causal in nature, and that all $PM_{2.5}$ constituents are equally potent. Even the presumption of causality is still subject to question, as has been

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appropriate to examine where the evidence of associations observed in the epidemiological studies was strongest and, conversely, where she had appreciably less confidence in the associations observed in the epidemiological studies;" and at 3161: "The Administrator views this information as helpful in guiding her determination as to where her confidence in the magnitude and significance of the associations is reduced to such a degree that a standard set at a lower level would not be warranted to provide requisite protection that is neither more nor less than needed to provide an adequate margin of safety." Similarly, for the current ozone NAAQS, the District Court for District of Columbia recently upheld USEPA's rationale for the current ozone NAAQS in 76 *Fed. Reg.* 16436 that an ozone NAAQS did not need to be lower than 0.075 ppm despite clinical evidence of some health responses at lower concentrations "because it 'would only result in significant further public health protection if, in fact, there is a continuum of health risks in areas with 8-hour average O_3 concentrations that are well below the concentrations observed in the key controlled human exposure studies and if the reported associations observed in epidemiological studies are, in fact, causally related to O_3 at those lower levels.' *Id* [at 16,483]. Based on the uncertainties EPA had identified 'in interpreting the evidence from available controlled human exposure and epidemiological studies at very low levels,' USEPA was 'not prepared to make these assumptions.' *Id.*" (U.S. Court of Appeals for the District of Columbia Circuit, State of Mississippi v. Environmental Protection Agency, No. 08-1200, decided July 23, 2013.)

[23] To the extent that any of the $PM_{2.5}$ and ozone co-benefits that might result from exposures to baseline levels that exceed the NAAQS, these will be eliminated by compliance programs to ensure attainment with that NAAQS; this tiny portion of the co-benefits (if any at all) should be attributed to the NAAQS rules, because they will be enforced without the CPP (even if current baseline regulations may not yet address them).

demonstrated by a $PM_{2.5}$ chronic risk study published in 2011.[24] Uncertainty about the causality presumption means there is a reasonable possibility that there will be no benefits at all from reductions of $PM_{2.5}$, whether above or below the NAAQS. USEPA's science assessment for the $PM_{2.5}$ NAAQS, which is the source of USEPA's assertion that the chronic mortality risk associations are causal, was written before the 2011 paper was published.

3.b. An Overly Simplistic Calculation Method Further Undercuts the Credibility of These Co-Benefits Estimates.

Besides the problems of logical inconsistency, implying overstatement, I note that USEPA has relied on a very simplistic method to make its co-benefits calculations in these RIAs. That is, USEPA uses rough average \$/ton multipliers to approximate the co-benefit from each ton of reduction in a criteria pollutant precursor emission. Such simplistic \$/ton estimates are unable to account for the level of criteria pollutant in the areas where the tons are reduced.[25] Indeed, USEPA does not even develop a baseline projection of the $PM_{2.5}$ and ozone levels against which the projected coincidental precursor emission reductions are assumed to occur. This highly simplistic method creates large uncertainties in an already dubious and uncertain risk analysis process.[26]

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[24] Sonja G, Dominici F, and Zeger S, "An Approach to the Estimation of Chronic Air Pollution Effects Using Spatio-Temporal Information," *Journal of the American Statistical Association* 106(494): 396-406, June 2011.

[25] CPP RIA, pp. 4-23 to 4-24.

[26] For a detailed exploration of the uncertainties in the $PM_{2.5}$ risk analyses that are used to generate the \$/ton estimates used to generate the benefits estimates in these RIAs (as well as in EPA's other, less simplistic criteria pollutant benefits analyses), see Smith AE and Gans W, "Enhancing the Characterization of Epistemic Uncertainties in $PM_{2.5}$ Risk Analyses," *Risk Analysis* 35(3) (forthcoming March 2015; available in early release on-line at DOI: 10.1111/risa.12236).

Additionally, it is highly likely that each of the criteria pollutant precursor emissions will increase in some locations, while decreasing in others. This is the standard result of policies like the CPP and the ozone NAAQS that affects emissions from the electricity generating system, which is a network of many geographically dispersed electricity generating units. As some generating units are shut down to meet an emissions limit, others that do not shut down may increase their generation to make up for the lost load. This geographical distribution of emissions changes could greatly alter the RIA's total co-benefits estimates – they could potentially be much smaller if the increases in emissions occur in more populated areas than where the decreases occur. However, the RIAs do not explore this possibility. Instead, USEPA states that it has no ability to determine where the air quality changes will occur.[27] (Even this statement is not factually correct. The estimates of precursor tons reduced that are the basis for the co-benefits estimates come from IPM model outputs. The IPM model has unit-specific detail, which means that locational information on the emissions reductions also could be obtained from its outputs.[28])

3.c. Reasons Why Co-Benefits of Already-Regulated Pollutants Should Not Justify Regulations of Other Types of Pollutants.

Even if individuals other than the USEPA Administrator were to claim confidence in the continued existence of the health-pollutant relationships for $PM_{2.5}$ and ozone far below the "adequate margin of safety" that a NAAQS must provide, to let regulations for totally different types of pollution issues be justified based on such co-benefits is a recipe for an unnecessarily complex web of air regulations that can only lead to economically-inefficient management of the public health.[29] For this reason, the co-benefits of already-regulated pollutants such as the criteria pollutants should not be included as benefits in regulations that are intended to manage altogether different risks, such as climate change. The merits of the proposed CPP should be determined on whether it produces an acceptable degree of climate change risk management. The merits of the proposed ozone NAAQS should be evaluated based on its ozone-related benefits.

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[27] CPP RIA, p. 4-40.

[28] Because all of the SO_2 emissions changes under the CPP will be from currently existing coal-fired power plants, the precise location of the SO_2 changes can easily be identified from IPM model results, including where the increases occur and where the decreases occur. The only minor complication for estimating the location of emissions increases would apply to NO_x, a small quantity of which will come from future new generating capacity as well. The IPM model does not identify the precise location of new capacity, but only where it would be within one of 64 electricity market regions of the U.S.

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[29] I provide a thorough case for this statement in Smith, AE. *An Evaluation of the $PM_{2.5}$ Health Benefits Estimates in Regulatory Impact Analyses for Recent Air Regulations*, prepared for the Utility Air Regulatory Group, December, 2011 (available: http://www.nera.com/publications/archive/2011/an-evaluation-of-the-pm25-health-benefits-estimates-in-regulato.html).

Ms. LUMMIS. We are interested, Dr. Smith. Thank you very much for your testimony.

Votes have been called on the floor. The subcommittee will reconvene shortly after the end of the last vote. If you could all return shortly after the last votes, we would deeply appreciate it.

The subcommittee stands in recess and with bated breath to hear the testimony of Drs. Harrison and Tierney.

[Recess.]

Ms. LUMMIS. I thank the panel for its patience with our leave of absence to be voting on the floor.

Our next witness is Dr. Harrison. Thank you for being here. We look forward to hearing from you. The floor is yours, Dr. Harrison.

STATEMENT OF DAVID HARRISON

Mr. HARRISON. Thank you, Chairwoman Lummis and members of the subcommittee. Thank you for the opportunity to participate in today's hearings.

I am Dr. David Harrison, Jr. My testimony is my own and does not represent my company or any client.

My comments on the economic impacts of EPA regulations are based on two recent NERA studies. One related to the national ambient air quality standard for ozone and one related to EPA's proposed Clean Power Plan to reduce carbon dioxide emissions from the electric utility sector.

Both studies indicate that these two major environmental policies could have very substantial economic impacts on individual States and on the U.S. as a whole. Let me start with the ozone study.

My written testimony is based on a July 2014 study we did, but today we released an update that reflects EPA's November 2014 ozone proposal. I believe you have received copies of that. I would like to request that it be entered into the record.

Ms. LUMMIS. Without objection, so ordered.

Mr. HARRISON. Thank you.

In this updated study, we evaluated a 65 ppb ozone standard. We used the same basic methodology as in our earlier study, but used EPA's newer released data on the emissions control technologies and costs.

A key finding of our analysis is that more than 60 percent of the emission reductions required to reach the 65 ppb standard was what EPA refers to as unknown controls. That is, controls that EPA did not identify in its analysis.

These controls, they assumed, would be equal to the same $15,000 per ton regardless of the emission source, the State or the level of control.

In contrast, we developed what we have referred to as an evidence-based approach to identify the likely nature of these controls. We concluded that they would mostly involve closure of power plants or turnover of older vehicles and similar equipment.

We found that most of these controls would cost much more than the $15,000 per ton that EPA had assumed.

Using these estimates of compliance costs and NERA's macroeconomic model called NewERA, we estimate that a 65 ppb ozone standard would reduce U.S. GDP by an average of $140 billion per year over the period from 2017 to 2040. The present value of the cost today would be $1.7 trillion.

Other impacts were correspondingly large. For example, the annual reduction in employment income would be equivalent to 1.4 million jobs per year. The annual reduction in consumer spending power would be about $830 per household.

Let me briefly turn to the Clean Power Plan Study. We evaluated what EPA's preferred option, what they referred to as Option 1, which was designed to reduce U.S. power CO2 emissions by 30 percent below their 2005 level.

They set these State level emission rates based on their analysis of production from four building blocks. These building blocks were energy efficiency, increased utilization of natural gas, increases in renewable and nuclear energy and increases in end use efficiency.

We used NERA's NewERA model to evaluate the effects of this under two cases. In one case, we assumed the States were able to use all four building blocks. In the other case, they would only be able to use two building blocks. In the interest of time, I will just summarize a few results of the four building block scenario. Note that the impacts of the two building block scenario were much greater.

We estimated what the U.S. energy system cost would be under the Clean Power Plan under these scenarios. Under the four building block scenario, the U.S. energy systems cost would increase by more than $360 billion on a present value basis over the 15 year period from 2017 to 2031.

The impacts on individual States of the Clean Power Plan would also be substantial. The most substantial impacts were on electricity prices. For 44 of the States, delivered electricity prices would increase by more than 10 percent per year on average over that 15 year period due to the Clean Power Plan.

In summary, these States indicate that both the proposed Federal ozone standard and the proposed Clean Power Plan could lead to very substantial costs and economic impacts, both on individual States and for the U.S. economy as a whole.

Thank you again for the opportunity to participate. I look forward to answering any questions you might have.

[Prepared Statement of Mr. Harrison follows:]

Prepared Statement of
David Harrison, Jr., Ph.D.
at a Hearing on
Impacts of U.S. Environmental Protection Agency Regulations
by the
Committee on Oversight and Government Reform
United States House of Representatives
Washington, DC

February 26, 2015

Mr. Chairman and Members of the Committee:

Thank you for your invitation to participate in today's hearing. I am David Harrison, Jr. I am an economist and a Senior Vice President of NERA Economic Consulting. I am also Co-Head (along with Dr. Anne Smith) of NERA's global environmental practice.

I have evaluated major environmental policies for more than forty years as an academic, public official and consultant, beginning in 1974 when I was a member of a National Academy of Sciences research team engaged by the U.S. Congress to evaluate the costs and benefits of the federal automotive emission standards established in the 1970 Clean Air Act. During the administration of President Jimmy Carter, I was a Senior Staff Economist at the President's Council of Economic Advisors, where I had responsibility for energy and environmental policy. I was the senior staff on the Regulatory Analysis Review Group, a White House group established to review major federal regulatory proposals, and was a member of the Regulatory Council, an interagency group that formulated guidelines for preparing economic analyses of federal regulations.

After leaving the President's Council of Economic Advisors, I returned to Harvard University as an Associate Professor at the John F. Kennedy School of Government, where I taught courses in energy and environmental policy, benefit-cost analysis and other subjects. For the past 25 years I have been a consultant at NERA, where I have evaluated numerous energy and environmental policies on behalf of many private and public clients, including the European Commission, the UK government, the U.S. Environmental Protection Agency, and the South Coast Air Quality Management District. I have a Ph.D. in Economics from Harvard University, a M.Sc. in Economics from the London School of Economics and a B.A. in Economics from Harvard University.

I thank you for the opportunity to share my perspective today on the costs and other impacts of major proposed rulemakings of the U.S. Environmental Protection Agency (EPA). My written comments are based upon two recent NERA studies, one related to the national ambient air quality standard for ozone that was released in July 2014 (NERA 2014a) [1] and one related to the proposed Clean Power Plan (CPP) that was released in October 2014 (NERA 2014b).[2] Both studies were done in collaboration with Dr. Anne Smith, who is submitting testimony in this same hearing regarding the potential benefits of these proposed regulations. We are currently updating our ozone study to reflect updated information made available by EPA in November 2014 when it released its proposed revision of the ozone standard. My written and oral testimonies reflect my own opinions, and do not represent any position of my company, NERA Economic Consulting or of any of its clients.

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[1] NERA Economic Consulting. 2014a. *Assessing Economic Impacts of a Stricter National Ambient Air Quality Standard for Ozone.* Prepared for the National Association of Manufacturers, July 2014.

[2] NERA Economic Consulting. 2014b. *Potential Energy Impacts of the EPA Proposed Clean Power Plan.* Prepared for American Coalition for Clean Coal Electricity, American Fuel & Petrochemical Manufacturers, Association of American Railroads, American Farm Bureau Federation, Electric Reliability Coordinating Council, Consumer Energy Alliance, and National Mining Association. October 2014.

I. Potential Costs and Economic Impacts of a Stricter Ozone Standard

Background on the Ozone Standard

The U.S. Environmental Protection Agency (EPA) has responsibility under Sections 108 and 109 of the Clean Air Act to establish, to review and to revise (as appropriate) a primary NAAQS that protects the nation's public health with an "adequate margin of safety." This assessment is made by the EPA Administrator based upon a review of various EPA assessments as well as review of advice from the Clean Air Scientific Advisory Committee (CASAC). Once a national standard is revised, states have the responsibility to develop State Implementation Plans (SIPs), documents that describe how the states will ensure that regions within their jurisdiction will attain and maintain the standard. States typically are given attainment deadlines that vary depending upon the severity of nonattainment. EPA has set NAAQS for six principal pollutants.

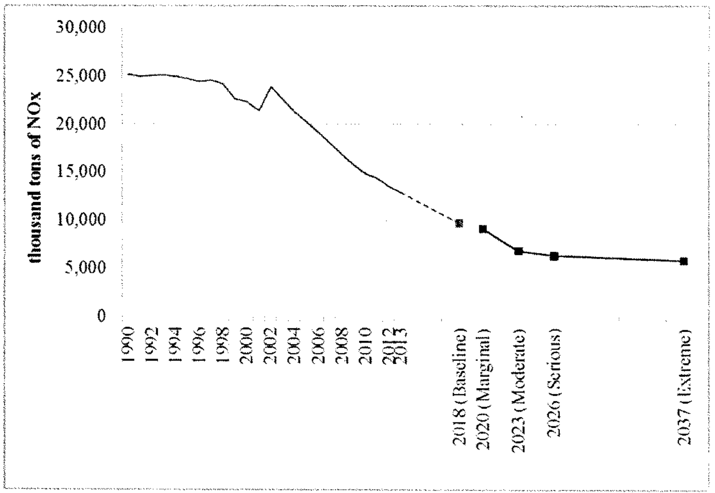
The Clean Air Act instructs EPA to review the NAAQS every five years. At the time of our study, the EPA was in the process of developing such a review and proposal, which was ultimately released in November 2014. In March 2008, the EPA had set an ozone standard of 75 parts per billion (ppb). In 2010, EPA reconsidered the ozone standard and evaluated lower potential standards, including 60 ppb. At the time of our study, EPA had stated its intention to consider tightening the standard to as low as 60 ppb. Our study thus evaluated a new ozone standard of 60 ppb, one value that seemed likely to be included in the new EPA proposal.

At the time of our study, EPA had not released any new ozone compliance cost estimates since its 2008-2010 analyses. The Agency had issued some updated information on projected baseline emissions, however. In addition, there was updated information on monitored ozone concentrations that indicated the air quality regions and states most likely to be designated in nonattainment with a 60 ppb standard. The updated information allowed us to develop estimates of the emissions reductions that would be required for these states to come into attainment, which we used to develop estimates of the costs of such a tightened NAAQS for ozone. The information EPA had made available was limited, however, and one purpose of our analysis was to illustrate the approach and types of data that we thought EPA should develop to provide a sound understanding of the economic impacts of a new ozone NAAQS. The approach and data development that are needed would be the same whether EPA chose to propose a standard of 60 ppb, as we analyzed in our July 2014 study, or some other level.

Background on Historical Trends in Ozone Precursor Emissions

One important point to note is that the ozone precursor emissions in the United States have declined dramatically in the last 25 years. Figure 1 shows that national anthropogenic NO_X emissions decreased from about 25.2 million tons in 1990 to 12.9 million tons in 2013, and that EPA projected that emissions would decrease to 9.7 million tons by 2018. The EPA information indicated that U.S. NO_X emissions would need to decrease to about 5.8 million tons to meet a 60 ppb standard throughout the country (as shown in the red line, which shows our assessment of the timing of the required reductions of about 3.9 million tons).

Figure 1: U.S. NO_X Emissions to Attain 60 ppb NAAQS Compared to Historical NO_X



Notes: Blue solid line: estimated historical emissions; blue dotted line: projected further declines through 2018; Red line: emissions to attain 60 ppb on attainment schedule.
The slight increase in U.S. NO_X emissions from 2001 to 2002 primarily reflects changes in EPA's emission modeling methodology for onroad and nonroad sources (switching from MOBILE6 to the National Mobile Inventory Model and MOVES)

Source: NERA (2014a) Figure S-1

Objectives of Our July 2014 Study

Our July 2014 study had two principal objectives:

1. Assess the costs and economic impacts of a 60 ppb ozone standard using the best available information from EPA and other sources; and

2. Develop recommendations for additional and updated information and analyses EPA should provide in its regulatory impact analysis (RIA) of a proposed rule, so that such assessments could be more fully evidence-based.

The first objective was predicated on the large potential significance to the U.S. economy of a more stringent ozone standard as indicated by EPA's own prior partial estimate (excluding costs in California) that the annualized costs would be $90 billion per year in 2006 dollars ($102 billion in 2013 dollars) to achieve a 60 ppb standard using one of EPA's calculation methodologies.[3] Unlike regulations that target specific sectors, an ozone standard would directly affect virtually every sector of the economy, because ozone precursors (oxides of nitrogen, or NO_X, and many types of volatile organic compounds, or VOCs) are emitted by a wide range of stationary, mobile, and area sources. Moreover, a tightened standard might result in other effects, notably potential constraints on domestic natural gas and crude oil development activity if nonattainment regions introduce permitting barriers or require emissions offsets to develop new wells and processing facilities.

The second objective of this study related to EPA's process of updating its analysis as it prepared its RIA. Our analysis revealed major gaps in information on compliance technologies and their costs and in other important information. Our research thus put us in a position to recommend information that EPA should develop and make available in order to provide comprehensive and reliable assessments of the economic impacts of a more stringent ozone standard.

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[3] U.S. Environmental Protection Agency (EPA). 2010b. *Supplemental Regulatory Impact Analysis (RIA) for the Reconsideration of the 2008 Ozone National Ambient Air Quality Standard (NAAQS)*. http://www.epa.gov/ttn/ecas/regdata/RIAs/s1-supplemental_analysis_full.pdf

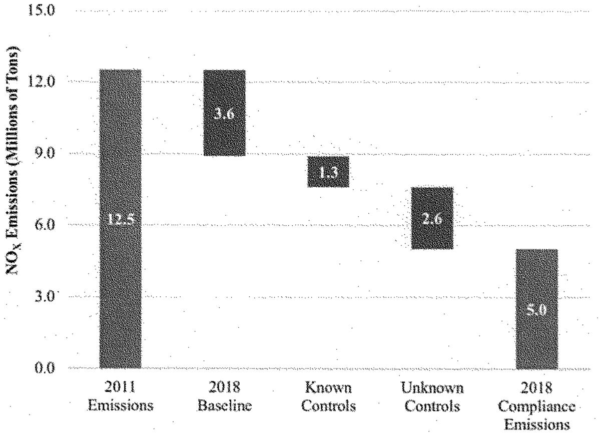
Methodology of the NERA July 2014 Study

Our 142-page July 2014 report provides details of the methodology we used to develop our estimates of compliance costs and to model the macroeconomic impacts of a 60 ppb ozone standard. Our compliance costs were based upon four major sources of information: (i) the most recent EPA information on projected 2018 baseline VOC and NO_X emissions supplemented by baseline emission projections for electric generating units (EGUs) from N_{ew}ERA, our integrated energy-economy model; (ii) our assessments (based upon earlier EPA analyses) of emission reductions that would be required for all regions of the United States to come into attainment; (iii) cost and emission reduction information that EPA had developed for what it referred to as "known" controls; and (iv) our estimates of the emission reductions and potential costs per ton of what EPA referred to as the "unknown" controls necessary to achieve attainment in each affected state.

The waterfall chart of Figure 2 summarizes estimates of the emission reductions needed in the 40 states EPA's information indicated would need to reduce NOx emissions in order to achieve a 60 ppb standard. The first reduction block consists of baseline reductions from 2011 to 2018 due to changes in activity and other non-ozone regulations presently being implemented. We treated these as costless (although we included the costs of controls to achieve the existing 75 ppb standard that have not been implemented). The second block is EPA's list of "known" controls, i.e., controls for which EPA had developed cost information. We used EPA's cost estimates for "known" controls. The third block is reductions that EPA called "unknown" controls, i.e., controls for which EPA had not developed specific cost information.

One critical point to note is the significance of "unknown" controls. These controls represent 2.6 million tons of NO_X, or fully two-thirds of the emission reductions that we predicted would be required to achieve a 60 ppb standard based on the available EPA information.

Figure 2: NO_X Emissions and Categories of NO_X Reductions to Attain 60 ppb NAAQS (for 40 Non-Attaining States Only)



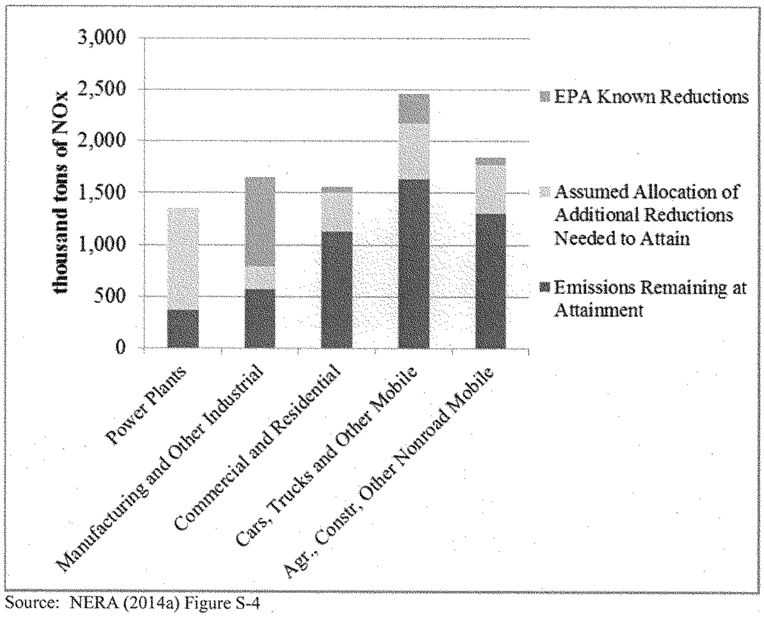
Note: Emissions and reductions include only states requiring emission reductions for compliance with a new ozone NAAQS of 60 ppb in the NERA (2014a) analysis.
Source: NERA (2014a) Figure S-2

EPA had developed a relatively simple methodology to estimate the costs of the "unknown" controls; this methodology did not use any information on the nature of the emissions that remained after "known" controls or the costs of any specific controls that could reduce these emissions.

In contrast to EPA's approach, we developed an evidence-based approach to estimating the potential costs of "unknown" controls. We evaluated the nature of the emission sources that remain (mostly from electricity generating units, or EGUs, and three types of non-point sources) and developed detailed estimates of the costs of reducing emissions from two significant categories (retirement of coal-fired power plants and scrapping of older cars and light-duty trucks).

Figure 3 shows the resulting mix of reductions assumed in our estimates of the compliance costs needed to achieve a 60 ppb ozone standard. The dark green shows EPA's "known" controls and the light green shows NERA's evidence-based assumptions regarding where "unknown" controls will likely come from. The remaining sum (shown in the blue bars) is 5.0 million tons—the aggregate limit to achieve attainment for the states projected to be in nonattainment under baseline 2018 emissions levels in our analysis. Our estimates assume deep cuts in the EGU sector, where emissions are concentrated in a few sources and costs per ton are thus lower than for the many smaller sources among the non-point source categories (i.e., area, onroad mobile and nonroad mobile). Our assumptions on "unknown" controls outside of the EGU sector involve much smaller incremental percentage reductions than from EGUs; but because these will require programs such as scrapping vehicles and other small sources, they are expected to come at a substantially higher cost per ton than the EGU controls—even though we assume that the scrapping programs only target the oldest, highest-emitting of each type of NO_X-emitting equipment.

Figure 3: NERA Analysis's Allocation of Additional Reductions Necessary to Attain a 60 ppb NAAQS to Categories of Emissions Sources in the 40 Non-Attaining States



Source: NERA (2014a) Figure S-4

N$_{ew}$ERA Model to Estimate Economic Impacts

We used NERA's N$_{ew}$ERA energy-economic model to develop estimates of the potential macroeconomic impacts on the U.S. economy of our estimates of compliance costs for attaining a 60 ppb ozone standard. The capital costs are incurred from 2017 until 2036 (the last projected compliance date, for extreme areas), while O&M costs are incurred for all years after compliance. Our economic impact analysis included the effects of costs incurred through 2040.

N$_{ew}$ERA is an economy-wide integrated energy and economic model that includes a bottom-up, unit-specific representation of the electric sector, as well as a representation of all other sectors of the economy and households. It assesses, on an integrated basis, the effects of major policies on individual sectors as well as the overall economy. It has substantial detail for all of the energy sources used by the economy, with separate sectors for coal production, crude oil extraction, electricity generation, refined petroleum products, and natural gas production. The model performs its analysis with regional detail. This particular analysis uses state-specific cost inputs.

National Results of the July 2014 NERA Study

We estimated that the potential costs of achieving a 60 ppb ozone standard would have a present value of $2.2 trillion as of 2014 (based upon costs incurred from 2017 through 2040), as summarized in Table 1. As a rough point of comparison, EPA's annualized cost estimate from its 2010 analysis implied a present value of about $0.9 trillion.[4] The primary difference in our methodologies is the extrapolation method used to estimate the cost of "unknown" controls that were not identified in EPA's 2008-2010 analyses; we attempted to understand the kinds of controls that would be required after "known" controls and based our method on the estimated costs of one such control (vehicle scrappage), whereas EPA relied on an arbitrary extension from "known" control costs.

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[4] Based on the annualized cost of $90 billion in 2020 for EPA's hybrid cost calculation with the middle slope parameter, converted to a present value over 20 years using a real annual discount rate of 5%, converted from 2006 dollars to 2013 dollars, and calculated as of 2014.

Table 1. Potential U.S. Compliance Spending Costs for 60 ppb Ozone Standard

	Present Value (Billions)			Cumulative
	Capital	O&M	Total	Coal Retirements
Compliance Costs	$1,190	$1,050	$2,240	101 GW

Note: Present value is from 2017 through 2040, discounted at a 5% real discount rate.
Cumulative coal retirements are incremental to baseline. These retirements are primarily due to assumed emission control measures but may also include indirect electric sector impacts of the ozone standards.
Source: NERA (2014a) Figure S-5

The potential costs we estimated for a 60 ppb ozone standard were projected to have substantial impacts on the U.S. economy and U.S. households. The national results were developed from detailed estimates of state-level impacts, which in the interest of brevity I am not reporting in this testimony. These state-level results indicated that although all states are affected—even those that do not incur compliance costs—the projected impacts of the 60 ppb ozone standard differ substantially by state. We also developed detailed estimates of the potential impacts on energy markets; again, in the interest of brevity, I am not reporting those results in this testimony. Moreover, I also do not present the results of a sensitivity case we evaluated based on the possibility that ozone standards would constrain future oil and gas production, particularly in rural areas. That sensitivity case resulted in much larger impacts on natural gas prices and increased the macroeconomic impacts by about 30 to 50%.

Table 2 shows the potential macroeconomic effects we estimated as measured by gross domestic product (GDP) and U.S. household consumption. The 60 ppb ozone standard was projected to reduce GDP from the baseline levels by about $3.4 trillion on a present value basis (as of 2014) and by $270 billion per year on a levelized average basis (spread evenly over years but retaining the same present value) over the period from 2017 through 2040. Average annual household consumption was projected to be reduced by about $1,570 per household per year.

Table 2. Potential Impacts of 60 ppb Ozone Standard on U.S. Gross Domestic Product and Household Consumption

	Annualized	Present Value
GDP Loss (Billions of 2013$)	$270/year	$3,390
Consumption Loss per Household (2013$)	$1,570/year	N/A

Note: Present value is from 2017 through 2040, discounted at a 5% real discount rate. Consumption per household is an annualized (or levelized) value calculated using a 5% real discount rate.
Source: NERA (2014a) Figure S-7

Table 3 focuses on several dimensions of projected impacts on income from labor ("worker income") as a result of the 60 ppb ozone standard. The projected impacts of the emissions reduction costs on labor income are substantial. Relative to baseline levels, real wages were projected to decline by about 1.2% on average over the period and labor income was projected to decline by about 1.9% on average, resulting in job-equivalent losses that average about 2.9 million job-equivalents. (Job-equivalents are defined as the change in labor income divided by the annual baseline income for the average job.) A loss of one job-equivalent does not necessarily mean one fewer employed person—it may be manifested as a combination of fewer people working and less income per worker. However, this measure allows us to express employment-related impacts in terms of an equivalent number of employees earning the average prevailing wage.[5]

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[5] The N_{ew}ERA model, like many other similar economic models, does not develop projections of unemployment rates or layoffs associated with reductions in labor income. Modeling such largely transitional phenomena requires a different type of modeling methodology; our methodology considers only the long-run, equilibrium impact levels.

These are the *net* effects on labor and include the positive benefits of increased labor demand in sectors providing pollution control equipment and technologies.

Table 3. Potential Impacts of 60 ppb Ozone Standard on Labor

	Avg.
Baseline Annual Job-Equivalents (millions)	156
60 ppb Case:	
Real Wage Rate (% Change from Baseline)	-1.2%
Change in Labor Income (% Change from Baseline)	-1.9%
Job-Equivalents (Change from Baseline, millions)	-2.9

Note: Average (Avg.) is the simple average over 2017-2040. "Job-equivalents" is defined as total labor income change divided by the average annual income per job. This measure does not represent a projection of numbers of workers that may need to change jobs and/or be unemployed, as some or all of the loss could be spread across workers who remain employed

Source: NERA (2014a) Figure S-8

Need for More Complete Information

Our July 2014 study emphasized the need for EPA to develop more detailed information, particularly on control costs, in order to provide a more accurate assessment of the costs and potential impacts of a more stringent ozone standard. Our analyses uncovered numerous gaps that we recommended that EPA fill as it developed its Regulatory Impact Analysis (RIA) for its ozone proposal, with perhaps the most important gaps related to the identity of control options and their costs to achieve the emissions reductions needed for attainment. The bulk of estimated compliance costs to meet a 60 ppb standard in EPA's 2008-2010 analyses were based upon "unknown" controls, *i.e.*, controls that are not attributed to particular control technologies or even to particular sectors. We developed estimates of these "unknown" costs based upon an assessment of the available information. But we recommended that EPA update and expand its compliance cost information to provide a more comprehensive assessment of emission control options and compliance costs. Moreover, our sensitivity analysis including natural gas production constraints suggested the importance of this issue and thus the need for EPA to evaluate the potential impacts of a tighter ozone standard on domestic natural gas and crude oil production.

II. Potential Energy Impacts of the EPA Proposed Clean Power Plan

Background on the Clean Power Plan

EPA proposed the Clean Power Plan (CPP) in June 2014 as a nationwide regulation under Section 111(d) of the Clean Air Act.[6] The proposal would set maximum limits on CO_2 emission rates (measured in pounds of CO_2 per megawatt-hour (MWh) of generation and end-use energy efficiency according to a formula described below) for electricity systems within relevant states.[7] In EPA's preferred regulatory approach (labeled "Option 1"), the final CO_2 emission rate standards would apply in 2030, and in that year total U.S. power sector CO_2 emissions would be 30% below their level in 2005. EPA also developed and evaluated an alternative approach (labeled "Option 2") with final standards in 2025. EPA developed interim limits in addition to the final limits for each regulatory approach. The proposal would allow states to develop regional programs for collective CO_2 emission reduction, as in the Regional Greenhouse Gas Initiative (RGGI) in nine Northeastern states that began in 2009.

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[6] U.S. Environmental Protection Agency, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule." 79 Federal Register 34830-34958. June 18, 2014. http://www.gpo.gov/fdsys/pkg/FR-2014-06-18/pdf/2014-13726.pdf.

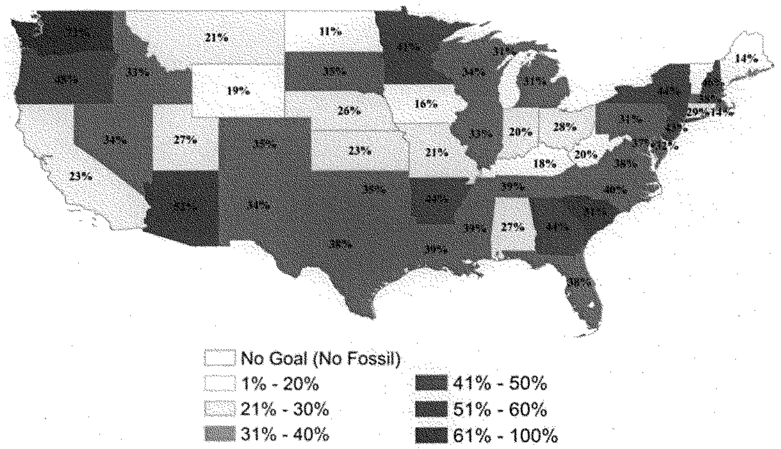
[7] The proposal does not set CO_2 emission rate limits for Vermont or Washington, D.C., because these jurisdictions do not have any affected fossil-fired power plants.

EPA set the state CO_2 emission rate limits based on their analysis of emission reduction opportunities in each state. EPA evaluated the opportunities in terms of four Building Blocks that can be summarized as follows:

1. Building Block 1—Heat rate improvements at coal units;
2. Building Block 2—Increased utilization of existing natural gas combined cycle (NGCC) units;
3. Building Block 3—Increases in renewables and nuclear energy; and
4. Building Block 4—Increases in end-use energy efficiency.

Figure 4 shows each state's reduction in CO_2 emission rate by 2030 as a percentage relative to each state's CO_2 emission rate in 2012, using EPA's emission rate formula and calculations.

Figure 4: CO$_2$ Emission Rate Reduction for 2030 Target Relative to 2012 Rate



Source: NERA (2014b) Figure 2

Objectives of Our Study

Our principal objective was to evaluate the potential energy market impacts and energy costs of the CPP, focusing on results over the period from 2017 through 2031 (2017 marking the beginning of the ramp up of EPA's assumed end-use energy efficiency and renewable generation, and 2031 representing the most stringent rates that are achieved by 2029). We developed impact estimates under two scenarios, both of which presume least-cost compliance by each state. (While appropriate for modeling, this least-cost presumption may lead to understating the real-world impacts and costs of the CPP.) The first scenario assumes that states are able to use all four Building Blocks and the second scenario assumes that states are constrained by legal considerations to only use Building Blocks 1 and 2 to show compliance with the targets in the CPP proposal.

1. *State Unconstrained (BB1-4).* Each state complies with its targets, with all four Building Blocks available as compliance options.
2. *State Constrained (BB1-2).* Each state complies with its targets; this scenario presumes that neither end-use energy efficiency (Building Block 4) nor renewables and additional nuclear energy (Building Block 3) would be available as compliance options.

We refer to the first scenario as a "state unconstrained" scenario to indicate that each state is presumed to comply using the least-cost mix across all four Building Blocks, although the specific mix of Building Blocks is limited to each state individually, and we assume there are no legal or implementation constraints to using all four Building Blocks. We refer to the second scenario as a "state constrained" scenario to illustrate the impact of state-by-state compliance with constraints, where states would only be able to use two of the four Building Blocks to demonstrate compliance. Despite the label "constrained," even in this scenario the states could still choose their preferred compliance mix, given the constraint. For our analysis, we assumed that each state chooses its own least-cost compliance strategy under both scenarios.

Methodology of the NERA Study

We evaluated the potential impacts of the two CPP scenarios using $\mathrm{N_{ew}ERA}$, focusing on the electricity and related energy module. The $\mathrm{N_{ew}ERA}$ model was calibrated to the U.S. Energy Information Administration (EIA) Annual Energy Outlook (AEO) 2014 Reference Case projection. This reference case reflects current environmental regulations (e.g., Mercury and Air Toxics Standards) and other policies, as well as the

EIA's most recent projections of energy and economic activity. The Reference Case includes the effects of the two major existing programs to reduce CO_2 emissions, the Regional Greenhouse Gas Initiative (RGGI) and the California cap-and-trade program.

Building Block Assumptions

We developed assumptions about the costs and effectiveness of the different compliance options.

Building Block 1 – Heat Rate Improvements for Coal Units

In its calculations of state targets, EPA assumed that all coal units could achieve a 6% improvement in their efficiency (i.e., reduction in heat rate), and in its cost modeling EPA also assumed this 6% improvement could be achieved at a capital cost of $100/kilowatt (kW). We understand that various industry experts have concluded that these assumptions are unrealistic in light of practical engineering considerations, actual industry experience, and the incentives owners of electricity generators already have to improve plant efficiency. Our clients suggested an alternative set of assumptions, in particular, (a) for a cost of $100/kW, a maximum efficiency improvement of 1.5% would be achievable for the most inefficient existing units and a 0.75% improvement would be available for units with average efficiency, and (b) no efficiency improvements would be available to the most efficient units. We investigated the significance to our incremental energy cost estimates of these alternative sets of assumptions regarding potential heat rate improvements and found that this set of assumptions did not have a major effect on the results; using EPA's heat rate assumption rather than the alternative set resulted in less than a 1% change in our estimate of the overall energy system cost of the CPP in the unconstrained scenario. Thus, although we did not undertake an independent assessment to determine the most realistic set of assumptions, we adopted the alternative industry set of assumptions regarding potential heat rate improvements. We note that while this set of assumptions has *de minimis* impact on our estimates of the impacts of the proposed CPP, this issue would be much more significant if the Section 111(d) limits for legal reasons had to be based solely on systems of emissions controls that can be achieved on the existing fossil units themselves. In that legal situation, this uncertainty would warrant a more thorough treatment of heat rate improvement assumptions than we determined was necessary for our analysis.

Building Block 2 – Increased Utilization of Existing NGCC

In its calculation of state targets, EPA assumed that existing NGCC units could increase their utilization to a 70% annual capacity factor (subject to the availability of coal- and oil-fired units to be backed down) regardless of any engineering, regulatory, or infrastructure constraints.[8] Increasing utilization of existing NGCC units up to each unit's maximum availability[9] is an option in all of our scenarios. The estimated incremental cost of this action depends upon the relative costs of the alternative sources of generation, which vary by electricity market region; the specific units backed down to achieve any increase in generation from existing NGCC units are determined in N_{ew}ERA.

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[8] Not all states are able to ramp up to 70%. Some states do not have sufficient coal- and oil-fired generation to be backed down; in this case, NGCC units were assumed to be able to ramp up to a level based upon backing out all coal- and oil-fired generation.

[9] For most units, the maximum availability is assumed to exceed 85%.

Building Block 3 – Increases in Renewable and Nuclear Generation

EPA's calculation of state targets includes the effects of added generation from existing and new non-hydroelectric units, existing nuclear generation termed "at risk," and new nuclear generation currently under construction. In all of our scenarios that include Building Block 3, additions of non-hydroelectric renewable and nuclear generation are presumed to be able to contribute to lowering emission rates, at the capital and operating costs that are standard in N_{ew}ERA.

Building Block 4 – Increases in End-Use Energy Efficiency

EPA's calculation of state targets was based upon its estimates of the quantities of end-use energy efficiency by state that could be added in each year based upon the programs adopted to-date in states with ambitious energy efficiency programs. EPA also provided estimates of the cost for this energy efficiency, with the first-year cost varying based on whether a state was adding less than 0.5% incremental energy efficiency ($550/MWh), between 0.5% and 1.0% ($660/MWh), or more than 1.0% ($770/MWh). EPA has translated the three first-year costs to levelized costs of 6.5¢/kWh, 7.8¢/kWh, and 9.1¢/kWh, respectively. We reviewed the literature and updated the cost estimates based upon a recent review by two prominent academic researchers;[10] the recommendation in this review implies a levelized cost of 10.6¢/kWh based on historical energy efficiency costs (including both utility costs and participant costs), which we presume relates to the EPA value for states adding less than 0.5% incremental energy efficiency. We scaled up EPA's first-year costs by the ratio of this value to the equivalent levelized cost for EPA (6.5¢/kWh), resulting in first-year energy efficiency costs of $896/MWh. We are not aware of any assessment regarding the extent to which energy efficiency costs may increase as the targets become more ambitious that is similar to the Allcott and Greenstone assessment on historical energy efficiency costs. Thus, we used the same assumptions as EPA regarding the changes, resulting in estimates of $1,075/MWh and $1,253/MWh (2011$) for the second and third levels of energy efficiency.

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[10] Allcott, Hunt and Michael Greenstone. 2012. "Is There an Energy Efficiency Gap?" *Journal of Economic Perspectives*, 26(1): 3-28. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.26.1.3

We modeled the adoption of energy efficiency as a compliance option based upon its cost relative to alternative means of reducing CO_2 compliance emission rates to comply with the CPP (using the same approach as EPA). As discussed in our report, however, there is a strong conceptual argument that cost-effective energy efficiency would be adopted in the absence of the CPP, i.e., in the baseline case to which the CPP case is compared in deriving the cost and impacts of the CPP.

National Energy Market Impacts of the Clean Power Plan

We estimated that the national energy market impacts of the CPP would be very substantial. The following tables provide our estimates of the energy sector impacts and energy costs of the two state compliance scenarios. The first scenario presumes that compliance costs are minimized using all four of the Building Blocks identified by EPA for the CPP targets. The second presumes that the same interim and final CPP state targets would have to be met, but that states would be constrained to using only Building

Blocks 1 and 2. In the interest of brevity, I focus on the results for State Unconstrained scenario in the following discussion.

Table 4 shows that the average annual energy system impacts of the Clean Power Plan would be very substantial. In the State Unconstrained (BB1-4) scenario, the annual average electricity sector CO_2 emissions would be reduced by about 22% relative to the reference case (not relative to 2005 emission levels) over the period from 2017 through 2031. Coal unit retirements would increase by about 45 gigawatts (GW). Coal-fired generation would decline by about 29% on average over the period, with natural gas-fired generation increasing by about 5% on average. The Henry Hub natural gas price would increase by about 2% on average. Delivered electricity prices would increase by about 12% on average over 2017 through 2031. However, these figures omit several factors that could add to impacts and costs.[11]

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[11] Potential infrastructure costs related to natural gas pipelines, electricity transmission, and voltage support or ancillary services are not included. Low projected capacity utilization of non-retired coal units would lead to decreases in efficiency (*i.e.*, increases in heat rates), additional wear and tear costs from operating coal units in a cycling mode, and potentially additional retirements, none of which are included in our modeling. Costs related to unit ramp rate constraints, minimum load constraints, and delays in new build or retirement permitting are also not accounted for in our cost estimates.

Table 4. Overview of Energy System Impacts of State Unconstrained (BB1-4) and State Constrained (BB1-2) Scenarios (Annual Average, 2017-2031)

	Total Coal Retirements Through 2031	Coal-Fired Generation	Natural Gas-Fired Generation	Henry Hub Natural Gas Price	Delivered Electricity Price	Electricity Sector CO2 Emissions
	GW	TWh	TWh	2013$/MMBtu	2013 ¢/kWh	MM metric tons
Baseline	51	1,672	1,212	$5.25	10.8	2,080
State Unconstrained (BB1-4)	97	1,191	1,269	$5.36	12.0	1,624
Change from Baseline	+45	-481	+57	+$0.11	+1.3	-456
% Change from Baseline	+18%	-29%	+5%	+2%	+12%	-22%
State Constrained (BB1-2)	220	492	2,015	$6.78	12.6	1,255
Change from Baseline	+169	-1,180	+802	+$1.53	+1.9	-825
% Change from Baseline	+69%	-71%	+66%	+29%	+17%	-40%

Note: Coal retirements are cumulative from 2014. Percentage change in coal retirements is relative to total baseline 2031 coal capacity.
Source: NERA (2014b) Figure ES-1

Table 5 shows the energy system costs of the two scenarios, expressed as present values in 2014 of spending incurred over the period from 2017 through 2031. The costs are broken down into three categories: (1) costs to serve electricity load; (2) costs of the end-use energy efficiency programs, both to the utilities and to the participants; and (3) costs of non-electricity natural gas use. Under the State Unconstrained (BB1-4) scenario, energy system costs are dominated by the costs to the utilities and to participants of the additional state energy efficiency programs, which are estimated to cost about $560 billion (in present value) over the period from 2017 through 2031. The reduction in electricity demand over the period 2017 through 2031 results in a net decrease in production costs to meet electricity load that has a present value in 2014 of about $209 billion; this partially offsets the investment costs of the energy efficiency programs. Higher gas prices are part of the higher cost to serve load, but they also affect consumers who purchase natural gas for non-electricity energy services; the higher consumer cost for direct consumption of natural gas adds another $15 billion to the present value of the

CPP over the years 2017-2031. The net result is that energy system costs would be greater by about $366 billion in present value terms over the period from 2017 through 2031 under the State Unconstrained (BB1-4) scenario.

Table 5. Energy System Costs of State Unconstrained (BB1-4) and State Constrained (BB1-2) Scenarios

	State Unconstrained (BB1-4)	State Constrained (BB1-2)
Present Value (Billion 2013$)		
Cost of Electricity, Excluding EE	-$209	$335
Cost of Energy Efficiency	$560	$0
Cost of Non-Electricity Natural Gas	$15	$144
Total Consumer Energy Costs	$366	$479

Note: Present value is from 2017 through 2031, taken in 2014 using a 5% real discount rate
Source: NERA (2014b) Figure ES-2

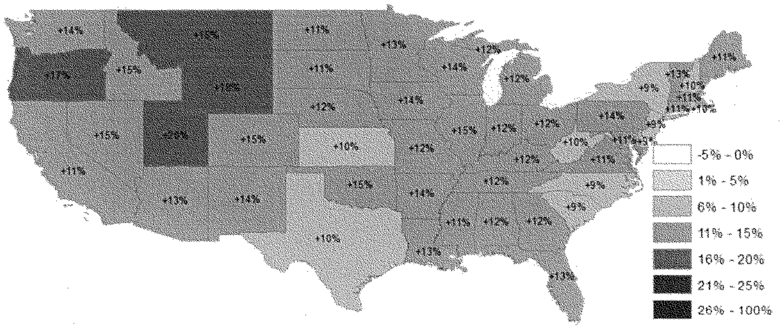
State Electricity Price Impacts of the Clean Power Plan

State delivered electricity prices would be affected by the CPP in various ways. One element is the upfront utility cost of end-use energy efficiency, which was assumed to be one-half of the total program cost of energy efficiency in both EPA's RIA analysis and our analysis. We treated the utility cost as a utility expense that is reflected in prices in the same year in which it is incurred. The consumer's half of the energy efficiency cost was *not* reflected in our delivered price estimates.

Energy efficiency programs tend to increase delivered prices for two reasons. First, as noted, the upfront utility costs of energy efficiency programs are recovered through delivered prices on remaining generation in the year they are incurred. Second, fixed transmission and distribution costs are spread over fewer electricity sales (because energy efficiency reduces end-use electricity sales). These increases can be offset somewhat by decreases in wholesale and capacity prices due to reduced electricity demand.

Figure 5 shows electricity price estimates (averaged over all sectors) for the State Unconstrained (BB1-4) scenario by state. The lowest state price impacts were estimated in the East Central and Northeast parts of the country, and the highest price increases were estimated in the Northwest. But virtually all of the predicted state electricity price impacts are substantial, with 44 states projected to experience annual average electricity price increases of 10 percent or more over the period from 2017 to 2031.

Figure 5: State All Sectors Delivered Electricity Price Impacts of State Unconstrained (BB1-4) Scenario (Annual Average, 2017-2031)



Source: NERA (2014b) Figure 17

Table 6 shows changes in average (2017 through 2031) electricity-related consumer costs by ratepayer class (residential, commercial, industrial, and averaged over all sectors) for the two scenarios. These costs are composed of electricity bills and the consumer cost of energy efficiency. The electricity bills component is calculated from delivered electricity prices and electricity sales and includes the utility program cost of any end-use energy efficiency (passed on to end users through higher electricity rates). Bills reflect both higher prices on electricity and, in the State Unconstrained (BB1-4) scenario, lower electricity demand due to energy efficiency reducing generation needs. When the consumer share of energy efficiency costs is included, total electricity-related costs in the State Unconstrained (BB1-4) scenario increase by an average of $34 billion per year from 2017 through 2031 across all sectors. Residential and commercial consumers have much larger increases in costs than industrial consumers in this scenario primarily due to lower energy efficiency use in the industrial sector than the other two sectors.

Table 6. Consumer Electricity-Related Cost Impacts of State Scenarios (Annual Average, 2017-2031, billion 2013 dollars)

	Residential	Commercial	Industrial	All Sectors
Baseline	$192	$161	$85	$439
State Unconstrained (BB1-4)				
Electricity Bills	$195	$164	$84	$443
Consumer Energy Efficiency Costs	$13	$13	$4	$29
Total Consumer Electricity-Related Costs	$207	$177	$88	$472
Change from Baseline	+$15	+$15	+$3	+$34
% Change from Baseline	+8%	+9%	+3%	+8%
State Constrained (BB1-2)				
Electricity Bills	$210	$179	$98	$487
Consumer Energy Efficiency Costs	$0	$0	$0	$0
Total Consumer Electricity-Related Costs	$210	$179	$98	$487
Change from Baseline	+$18	+$18	+$13	+$48
% Change from Baseline	+9%	+11%	+15%	+11%

Source: NERA (2014b) Figure 19

Ms. LUMMIS. Thank you for your testimony, Dr. Harrison.

I would now like to recognize Dr. Tierney for 5 minutes. Welcome, Dr. Tierney.

STATEMENT OF SUSAN F. TIERNEY

Ms. TIERNEY. Thank you so much, Chairman Lummis, Ranking Member Lawrence and subcommittee members. It is very nice to be here today. Thank you very much.

As you know, the EPA has responsibility under the Clean Air Act and the Clean Water Act to protect the public from harmful discharges of pollutants into the Nation's air and waterways.

In the decade since these Federal laws were enacted, they have led to improvements in the public s health and protected the Nation's natural resources on which our entire economy depends. As scientific information has evolved over time, as has technology, so has the administration of these Federal laws.

I am a former Environmental Secretary and energy regulator in the State of Massachusetts where I was appointed by both Republicans and Democrats. I have direct familiarity with administering Federal and State laws to protect the environment and energy markets.

Since leaving government, I have been a consultant and worked for a wide variety of clients looking at energy markets, State environmental laws, Federal environmental laws, local economies and impacts on consumers of a variety of different public policies.

The three proposed EPA regulations under discussion today are important regulations from a public health point of view, but are also important for local economies and economic development.

First, clarifying the scope of Federal jurisdictions and consistency of treatment of waterways across the Nation helps to provide appropriate signals to private actors about what they can expect when States review their economic development activities. Lack of clear rules is known to chill economic development.

Second, ensuring that ozone standards remain up to date and consistent with the evolving State of knowledge in the scientific community is critically important for public health and for local economies as well.

Economic impact analyses that fail to look at the benefits to public health are inherently inconsistent with what the ozone standard is all about, which is public health.

Third, the rest of my testimony will focus on the EPA's proposed Clean Power Plan. The EPA is required to establish emissions controls on the power sector. In doing so, the EPA has adopted a regulatory approach that offers significant flexibility to the States to fashion their own plans to control emissions from power plants in ways that work well for their economies.

Having a reliable and efficient electric industry is critically important for Americans and the U.S. economy and so is addressing carbon pollution. In that context, the EPA's proposal is critically important.

The Supreme Court has said that greenhouse gases are an air pollutant under the Clean Air Act. The American power sector represents the Nation's largest source of greenhouse gas emissions. Americans are feeling the effects of costly climate change already.

The power sector in the United States emits 1 out of every 15 tons of pollutants anywhere in the globe. It is a major source of the global warming emissions and is costly for climate change.

Equally important is assurance that the electric system is reliable and it is affordable. Fortunately, EPA's proposal allows States to adopt approaches that minimize the Clean Power Plan's cost to consumers.

In the past year, I have co-authored three reports on EPA's proposed impacts on consumers and electric system reliability. In researching the newest one of those reports, which we issued last week and which I have attached to my testimony, my colleagues and I read a significant number of the comments that have been filed on the EPA's proposal.

We found that many studies and comments incorrectly presume that the rule will be inflexibly implemented, which is opposite to the way it has been designed. The assumptions are worse case scenarios and assume that the private sector will idlely stand by as will regulators rather than doing their jobs to make sure the impacts are at least cost and that there are reliable outcomes. There is no historical basis for those sets of assumptions.

The issues will be solved by a dynamic interplay of actions by regulators and market participants with solutions proceeding in parallel. Indeed, this dynamic interplay is the reason why a recent survey of 400 utility executives in the United States said they support the proposed Clean Power Plan and the emissions targets.

Finally, the electric industry is undergoing major change as we know. Those changes are from the shale gas revolution, its price pressure on coal in many parts of the country, the domestic supply of renewable energy in vast parts of the United States, aging infrastructure and a significant growth in energy productivity.

These shifts are underway and are causing enormous changes in the industry. Had the EPA never proposed the Clean Power Plan, we would be seeing many and the same kinds of directions we are seeing in the U.S. electric sector in any event.

Thank you very much.

[Prepared Statement of Ms. Tierney follows:]

Testimony of Susan F. Tierney, Ph.D.
Analysis Group, Boston

Before the U.S. House of Representatives
Committee on Oversight & Government Reform, Subcommittee on Interior

Hearing to Examine the Impacts of EPA Air and Water Regulations on the States and the American People

February 26, 2015

Good morning, Chairman Lummis, Ranking Member Lawrence, and Members of the Subcommittee. My testimony focuses on the impacts of the Environmental Protection Agency's recent proposals to address air and water pollution affecting the health and welfare of the American people. The EPA has responsibility under the U.S. Clean Air Act and Clean Water Act to protect the public from harmful discharges of pollutants into our air and waterways.

In the decades since these major federal environmental laws were passed, they have brought about improvements in the public's health and protected the nation's natural resources on which our economy depends. As scientific information and technological advances have occurred, so has the administration of these laws over time.

As a former state cabinet officer (Secretary of Environmental Affairs) and regulator (public utilities and energy facilities) in Massachusetts (where, incidentally, I was appointed by governors of both parties), I have direct familiarity with state administration of federal and state environmental laws. As a consultant for a wide variety of clients (including state governments, private companies, grid operators, utilities, large consumers, project developers, foundations, tribal governments), I also have studied the implications of federal and state energy and environmental laws on energy markets, electric reliability, local economies, and consumers.

I am familiar with the three sets of EPA regulations under discussion today: a new ambient air equality standard for ozone (smog); the new regulations under the Clean Air Act to reduce emissions of carbon pollution from existing power plants; and clarifications regarding the definition of U.S. waters under the Clean Water Act.

These are important regulations from a public health point of view, but they are also important for local economies and economic development. Clarifying the scope of federal jurisdiction and consistency of treatment of waterways across the nation helps to provide appropriate signals to private actors about what they can expect when states review their development projects. Ensuring that ozone standards remain consistent with the evolving scientific evidence of harm is critical for the health of local populations and economies. Reducing emissions of carbon pollution from the power sector will bring benefits in the long run to Americans.

My testimony focuses in particular on the EPA's proposed Clean Power Plan. As with the other regulations, the EPA is required to establish emissions controls on the power sector. In doing so, the EPA has adopted a regulatory approach that offers significant flexibility to the states to fashion their own plans to control emissions from power plants in ways that work well with their own circumstances.

Having a reliable and efficient electric industry is, of course, critically important for Americans and for the U.S. economy. Americans demand world-class electric reliability at reasonable prices. The U.S., as the world's largest economy and the world's historically largest emitter of carbon pollution, is poised to take seriously its role in controlling such emissions.

In that context, EPA's proposed power-plant regulations are critically important. The Supreme Court has held that "greenhouse gases fit well within the [Clean Air] Act's capacious definition of 'air pollutant'." The American power sector represents the nation's largest source of greenhouse gas emissions. Americans are already feeling the damaging effects of climate change. The U.S.'s cumulative CO_2 emissions exceed those of any other country, and our power sector produces one out of every 15 tons of energy-related CO_2 emissions produced anywhere in the globe. Taking action to reduce emissions from the U.S. power sector will have a material impact on reducing global emissions and mitigating the costly impacts of climate change.

Just as important are the laws, policies, and expectations surrounding assurance of electric system reliability and provision of electricity at just and reasonable rates. Fortunately, the regulation allows flexibility that states can use to implement the Clean Power Plan in ways that can minimize impacts on consumers.

In the recent past, I have authored or co-authored three reports on the EPA proposal's impacts on consumers and electric system reliability. I attach them to this statement.

Having read a significant portion of the comments submitted by stakeholders about the Clean Power Plan, my co-authors and I found in our most recent report (published last week) that many comments presume inflexible implementation, are based on worst-case scenarios, and assume that policy makers, regulators, and market participants will stand on the sidelines without doing their jobs to ensure lowest-cost and reliable outcomes. There is no historical basis for these assumptions.

These issues will be solved by the dynamic interplay of actions by regulators, entities responsible for reliability, and market participants – with many solutions proceeding *in parallel*. Indeed, this dynamic interplay is one reason why a recent survey of over 400 utility executives nationwide found that more than 60 percent felt optimistic about the Clean Power Plan and either supported EPA's proposed current emissions reduction targets or would make them more stringent.

Finally, the electric industry is undergoing major transitions. These changes arise from such things as: dramatic increases in domestic energy production (stemming from the shale gas revolution), shifts in fossil fuel prices (so that gas is less expensive than coal in many power plants), retirements of aged infrastructure, and strong growth in energy efficiency and distributed energy resources. In light of the significant shifts already underway in the electric system, the industry would need to adjust its operational and planning practices to accommodate changes even if EPA had not proposed its carbon-control regulation.

Thank you for the opportunity to present this testimony to the Subcommittee.

Susan F. Tierney, Ph.D.
Senior Advisor
Analysis Group

Electric System Reliability and EPA's Clean Power Plan: Tools and Practices
White Paper, February 2015

Susan Tierney
Paul Hibbard
Craig Aubuchon

http://www.analysisgroup.com/search-results/#t=electric%20system%20reliability%20and%20epa's%20clean%20power%20plan

Ms. LUMMIS. I thank the panel. We will now have questions from members of this subcommittee. The Chair first recognizes herself for 5 minutes.

I have a quick question for Dr. Harrison. Before I do, Dr. Tierney, is it your position that carbon is a pollutant?

Ms. TIERNEY. Yes.

Ms. LUMMIS. Dr. Harrison, is carbon a pollutant?

Mr. HARRISON. I think the issue is whether it is regulated. I guess those are legal issues. I understand that it is considered a pollutant in terms of the regulatory process that is underway.

Ms. LUMMIS. I have a quick question for you about EPA's attainment level for ozone. If it is set at 65 ppb, could you elucidate me about some of the effects? I think I heard you say for 44 States, 10 percent per year for 15 year increase in electricity costs, is that correct?

Mr. HARRISON. No. I think at that point I was talking about the Clean Power Plan. In terms of the 65 ppb ozone regulation that we evaluated, I summarized some of the results. We found that the present value of the compliance costs would be over $1 trillion.

I think I mentioned in terms of the effects on gross domestic product would be around $140 billion per year with a present value over the period 2017 to 2040 of $1.7 trillion. Those are two examples.

Our study we just released describes a great many other impacts which I would be glad to go into if you like.

Ms. LUMMIS. I will come back to you on that so hold that thought, please.

I would like to ask Attorney General Rutledge, given this testimony and what you have learned about the EPA's proposed regulations, what kind of impacts will there be on your State? I am really concerned about lower and middle income residents of your State.

Ms. RUTLEDGE. Thank you for the question.

These EPA regulations and energy costs that would result from 111(d) being implemented, this rule being implemented, would significantly raise the cost for all Arkansans and all ratepayers.

It would dramatically hurt the lower income and middle income ratepayers because of such a dramatic increase. I would be remiss if I did not mention that it would also hurt small businesses in Arkansas that are trying to make payroll.

A $20 increase may not seem like much to those living in the seven richest counties in the United States here around the Beltway but for those folks living in rural Arkansas trying to make a payroll, a $20 increase is a dramatic difference.

Ms. LUMMIS. Attorney General Fox, same question, what about the impact of these EPA regs affecting both air and water on the citizens of Montana?

Mr. FOX. Thank you for the question.

First of all, let me say that primarily as the chief legal officer of the State of Montana, my appearance here today is primarily focusing on the rule of law, the Constitution and particularly the separation of powers, cooperative federalism as we see in the Clean Air Act and the Clean Water Act and their original statutes and intent, and also the limits of executive power.

With that said, as I mentioned earlier in my testimony, if I may focus once again on the Crow Nation. That is one area where the harm of these regulations, should they be implemented, goes without saying but is worth repeating.

There is a large portion of coal on the Crow Reservation, a 40 year old coal mine that produces some 7.5 million tons of coal, provides $10 million to $20 million of revenue to the Crow people, which is three-quarters of their non-Federal revenue. The mine employs up to 150 people, 70 percent of those are members of the Crow Tribe.

With the decommissioning of their primary clients in Michigan and Minnesota and their coal-fired electric generation plants, they will lose their market. When they lose their market, the mine will close.

The tribe estimates that will raise the unemployment rate somewhere from 50 percent on the reservation, as it is now, to as high as 90 percent. The harm that would cause to the people of the Crow Nation and, more generally to the people of Montana, is very extreme.

I think that is an area where we can certainly focus and the Administration's failure to follow through on their obligation to consult with the tribe really requires them to go back to the drawing board.

I would echo what Attorney General Rutledge says in terms of higher rates and the impact on the poor. I think those go without saying. Primarily, I am here as a lawyer and the chief lawyer of the people of Montana. I really want to stick to that expertise.

Ms. LUMMIS. I thank the panel.

The Chair now recognizes the gentleman from Pennsylvania, Mr. Cartwright, for 5 minutes.

Mr. CARTWRIGHT. Thank you, Madam Chairwoman.

Dr. Harrison, thank you for appearing before us today. I had a couple of questions for you.

You said you are appearing today expressing your own opinions and those of nobody else, is that correct?

Mr. HARRISON. That is correct.

Mr. CARTWRIGHT. You told us about the results of some studies that you did, one about ozone and one about the CPP. My first question about the CPP study is that was something your company did, NERA Economic Consulting?

Mr. HARRISON. That is right.

Mr. CARTWRIGHT. Can you give us an idea of how much time went into that study?

Mr. HARRISON. It was a substantial study. I don't recall the exact number of hours, but it was a substantial study using our NewERA model to evaluate the effects of the Clean Power Plan.

Mr. CARTWRIGHT. It was not a minor study that NERA Economic Consulting did. It was a major one, is that correct?

Mr. HARRISON. Yes, we considered it a major study, yes.

Mr. CARTWRIGHT. I was looking at footnote 2 from your written testimony. It said that, among others, that study was prepared for the American Coalition for Clean Coal and, Electricity, the American Fuel and Petrochemical Manufacturers and the National Mining Association. Have I read those correctly?

Mr. HARRISON. That is correct.

Mr. CARTWRIGHT. In laymans terms, does that mean they helped fund the study?

Mr. HARRISON. Yes, we prepared the study for those organizations.

Mr. CARTWRIGHT. Dr. Harrison, is it a matter of complete indifference to you whether those associations and organizations continue to fund studies prepared by NERA Economic Consulting?

Mr. HARRISON. When we do studies——

Mr. CARTWRIGHT. It is a yes or no question. Do you care if they continue to fund your outfit?

Mr. HARRISON. I think what I prefer to do, if I may, is ask what they did ask us to do. They asked us to do a careful, independent study of the effects of the Clean Power Plan on the U.S. energy markets.

Mr. CARTWRIGHT. Let me ask it this way. What about the American Wind Energy Association, did they help fund that study?

Mr. HARRISON. No, they did not.

Mr. CARTWRIGHT. What about the Solar Energy Industry Association, did they help fund your study?

Mr. HARRISON. No, they did not.

Mr. CARTWRIGHT. Did any sustainable energy association at all get involved in funding your study?

Mr. HARRISON. No, it was not funded by those organizations.

Mr. CARTWRIGHT. Dr. Tierney, I have some questions for you about the clean water rule.

The EPA and the U.S. Army Corps of Engineers proposed the clean water rule to clarify the definition of waters of the United States which are the water resources that under the Clean Water Act receive numerous protections against pollution.

The EPA Stated, “The agencies are eager to define the scope of the Clean Water Act that achieves the goals of protecting clean water and public health and promoting jobs and the economy.”

Dr. Tierney, ensuring that the Clean Water Act achieves these goals is important, would you agree?

Ms. TIERNEY. I would agree with that.

Mr. CARTWRIGHT. The Bureau chief of the Environmental Protection and the Office of New York State Attorney General Eric T. Schneiderman, recently testified, “Presently, jurisdictional decisions related to waters of the United States are made on a case by case basis subject to fractured and inconsistent legal interpretation by the courts fostering uncertainty, delay and further litigation.”

The EPA has Stated they have received numerous calls for clarification of waters of the United States from a variety of stakeholders. Members of Congress, developers, farmers, States and local governments, energy companies and many others demanded new regulations to make the process of identifying waters protected under the Act clearer, simpler and faster.

Dr. Tierney, in general, Federal regulations that make a process clearer, simpler and faster will most likely benefit stakeholders, would they not?

Ms. TIERNEY. Yes, from my experience in administering such environmental laws, that was clearly the case. I can’t tell you the number of times various parties talked about the need to clarify the rules.

Mr. CARTWRIGHT. Clarifying it makes it simpler and easier and more effective for everyone, right?

Ms. TIERNEY. Yes.

Mr. CARTWRIGHT. Thank you.

I yield back, Madam Chair.

Ms. LUMMIS. I thank the gentleman.

The Chair now recognizes the gentleman from Oklahoma, Mr. Russell, for 5 minutes.

Mr. RUSSELL. Thank you, Madam Chair.

Dr. Tierney, are you aware that over 4,000 American eagles, red tail hawks, American kestrels and burrowing owls are killed every year by wind turbines?

Ms. TIERNEY. I did not have that fact at my fingertips. I would love to see the reference to it.

Mr. RUSSELL. I would be happy to provide that to you.

Do you believe that the destruction of American birds is good for the environment?

Ms. TIERNEY. No, but I know that energy resources of every kind, especially fossil fuels have hazardous impacts of the nature you are describing.

Mr. RUSSELL. Are you aware that solar energy also destroys thousands of birds every year, many of them rare species?

Ms. TIERNEY. That would really surprise me to learn.

Mr. RUSSELL. I will show you the videos.

Do you believe that a depression in a farmer or rancher's field that collects rainwater is a navigable waterway?

Ms. TIERNEY. I understand that the EPA's proposal is based on scientific evidence of the relationship between water systems, wetlands and a variety of other things into navigable waters of the United States.

Mr. RUSSELL. In the case of a ranch in my home State, which is not connected to any coast, that would be a navigable waterway if it was a depression full of rainwater in my district?

Ms. TIERNEY. I understand there are navigable waterways of the United States that are in the interior of the United States because they cross interState commerce and a variety of other things.

Mr. RUSSELL. Have you ever navigated on a puddle after a rainstorm on a ranch in Oklahoma?

Ms. TIERNEY. I think that is a facetious question.

Mr. RUSSELL. I am just curious because it seems that people think this is a navigable waterway.

Ms. TIERNEY. I don't have any information about a puddle that you are describing. I understand that the EPA's proposal is based on scientific evidence.

Mr. RUSSELL. On scientific evidence—I will try to scientifically navigate a puddle after a rainstorm.

Attorney General Fox, what impact do EPA rules have on tribal sovereignty?

Mr. FOX. They have an impact in actually impeding and invading on tribal sovereignty. I think it is important to note that under the Executive Order cited earlier and the EPA policy promulgated from that order, the executive branch has imposed upon itself a very important duty and responsibility to consult with each tribe of which there are 566 federally recognized tribes in the United States.

In this case, the EPA sent out a Dear Tribal Leader letter a mere 2 days before the promulgation of the rule, the 111(d) rule. That Dear Tribal Leader letter referred only to the possibility of a tribe having on its reservation a coal-fired generation plant that might allow the tribe then to have primacy of its own air regulatory program.

It did not give anyone a heads up, certainly not a timely heads up and certainly not the four tribes who have coal and minerals on their reservations any indication of the impact that rule might have on the sovereignty of that tribe.

We have seven federally recognized tribes in Montana. I think it is very important as a State and a Nation that we respect the treaties and agreements we have with those tribes. Unfortunately, in this case, the EPA has violated the sovereignty of the Crow Nation pertaining to its Absaloka Mine.

Mr. RUSSELL. I want to thank you for that.

In my limited time that is left, I will direct this to Dr. Harrison. You spoke of $140 billion a year reduction in the GDP annually for a 65 ppb rate. Were you aware that the entire education budget being proposed this year was $140 billion with the Student Success Act?

Also, were you aware that four times of the entire estimated gains of the Trans Pacific Partnership would be that number and that one third of the defense budget equals the number you cited? What impact would that have on our economy?

Mr. HARRISON. I was not aware of those combinations but I guess it is another way of trying to put into perspective these estimates.

Mr. RUSSELL. I appreciate the panel and the testimony here today. I think it is important for the Nation to see the impacts on people in Montana, Arkansas, Oklahoma—which has also joined in some of these lawsuits. We certainly have tribes as well.

I thank you, Madam Chairman, for this time.

Ms. LUMMIS. I thank the gentleman.

The Chair now recognizes the gentlelady from the Virgin Islands, Congresswoman Plaskett.

Ms. PLASKETT. Good afternoon and thank you very much, Madam Chair.

Thank you, testifiers for being here.

I think it is very interesting and should be noted for the record that the EPA is not here for this hearing because we are in a proposed rulemaking position and therefore, it would be inappropriate for them at this time to testify on this matter. I think we need to reflect on the fact these are proposals as yet and not, in fact, rules.

It appears this is not a new issue and there is a lot of rhetoric in the industry right now about the EPA's proposed Clean Water Power Plan, the ozone regulations killing jobs, and excessively raising industry compliance costs. Ms. Rutledge talked about a perfect storm.

These sky is falling claims don't appear to be new. As a matter of fact, I have from June 2014, which I would like to submit to the record, a fact sheet prepared under Ranking Member Henry Waxman which gives facts on the Clean Air track record and pollution reductions.

Since its adoption in 1970, there has been a reduction in key air pollutants by over 70 percent while the economy has more than tripled in size.

Dr. Tierney, do you think the economic predictions currently used by the industry regarding clean power plant and ozone rules are reasonable?

Ms. TIERNEY. I think there is a problem with many of the assumptions about how the industry is going to respond to a signal saying that things need to be done differently in the future.

As I mentioned, many of the assumptions of the worst case studies are not realistic with what the cost impacts are likely to be at the moment. I say that knowing that EPA is very likely to make changes in its proposal. We don't know what those changes will look like. EPA has been very open in indicating they are learning from the millions of comments they have received.

They expect to provide a fundamentally flexible rule for people. That flexibility doesn't show up in many of the economic studies. That will be the essential way in which private investors, developers, homeowners who have drafty homes will be able to tighten those up and not use as much energy in the future.

Ms. PLASKETT. I live on an island that has to balance clean air. The importance of our natural resources is of paramount concern to us. At the same time, we also had one of the largest oil refineries in the United States which was a balance between having jobs for our people as well as protecting our sun and sand.

Dr. Harrison, I wanted to ask you if you have looked at the long term economic and social benefits of the rules? Are there any, in your opinion?

Mr. HARRISON. As I think I mentioned, our study was designed to look at the economic impacts of the rules. I think my colleague, Dr. Smith, did comment on some of the benefit assessments that have been made in the rules.

Ms. PLASKETT. Do you not believe that there are any because an impact would have to look at the negative as well as the positive, correct?

Mr. HARRISON. The terminology sometimes can be economic terminology but the typical economic terminology for looking at economic impacts is to look at the effects on the economy. These effects typically are in terms of gross domestic product, job and labor market impacts and the like.

In this study, we did not look at the potential benefits of this program.

Ms. PLASKETT. How can you analyze an impact in terms of its economic impact negatively if you don't look and determine also and measure the economic benefits of that?

Mr. HARRISON. Those can be done. Before coming to NERA, I was an Associate Professor at the Kennedy School of Government and did many benefit cost analyses. That was not the topic of this particular study.

Ms. PLASKETT. Your study was merely to look at the negative impacts?

Mr. HARRISON. No, it was not. I think the way I would look at it is that it was trying to clarify what is at stake for the U.S. economy and individual States. There is certainly very useful information to be developed on what the benefits are.

As I said, my colleague, Dr. Smith, has evaluated both of these two proposals in terms of their potential benefits. That was not the topic of this particular study. I think you will find the studies typically referred to as economic impact studies do precisely the same thing, look at what those impacts would be on the U.S. economy and individual States.

Ms. PLASKETT. Ms. Tierney, did you see what those social or economic benefits were?

Ms. TIERNEY. Sure. One would surely want to look at the public health impacts of a clean power plant or an ozone standard. Certainly the cost of the health care of American people is a cost and drag on our economy. Not looking at those doesn't provide a balanced picture of the impacts of the ozone standard.

Ms. PLASKETT. Thank you. I have exhausted my time and I thank you for your indulgence, Madam Chairwoman.

Ms. LUMMIS. The gentlelady yields. The Chair now recognizes the gentleman from Arizona, Dr. Gosar.

Dr. GOSAR. Thank you, Madam Chair.

Dr. Tierney, is CO2 a pollutant?

Ms. TIERNEY. I understand that the U.S. Supreme Court has determined that it is a pollutant.

Dr. GOSAR. No, no, I did not ask that. I asked you.

Ms. TIERNEY. Yes and I answered a minute ago that I thought it is, yes.

Dr. GOSAR. I will come back to that.

Attorney General Fox, you love dirty water, don't you?

Mr. FOX. Say again, sir?

Dr. GOSAR. You love dirty water out in Montana?

Mr. FOX. No, sir.

Dr. GOSAR. I am from Arizona and we love dirty water. How about you, Attorney General Rutledge?

Ms. RUTLEDGE. No, Doctor, we do not like dirty water in Arkansas.

Dr. GOSAR. Let me ask you a question. Did you ask EPA to clarify the waters of the U.S., Attorney General Rutledge?

Ms. RUTLEDGE. I have not personally asked the EPA.

Dr. GOSAR. Are you aware of anything in your State asking the EPA for clarification on waters of the U.S.?

Ms. RUTLEDGE. That would have been under my predecessor.

Dr. GOSAR. How about you, Attorney General Fox?

Mr. FOX. I am not aware of the State officially asking for any clarification. As far as I know, we have not needed any clarification under the existing status rules.

Dr. GOSAR. Out in Arizona, we have the same problem. We are trying to figure out who these people are asking for clarification other than some bureaucrats.

Dr. Tierney, I am coming back to that conversation about CO2. Would you consider it an essential gas?

Ms. TIERNEY. Are you asking if it is physically in our atmosphere?

Dr. GOSAR. I said, is it an essential gas?

Ms. TIERNEY. I don't understand your question.

Dr. GOSAR. Is it an essential gas for this planet?

Ms. TIERNEY. Sure, but at high concentrations, we will have a greenhouse effect on the planet.

Dr. GOSAR. So you are aware of photosynthesis? I got it.

Ms. TIERNEY. Of course I am.

Dr. GOSAR. Good old plants take CO2 and dirty water.

Ms. TIERNEY. And they are out of balance right now.

Dr. GOSAR. I think that is negatable.

Attorney General Fox, are you aware there are four Supreme Court rulings defying the EPA for where they want to go with the waters of the U.S.?

Mr. FOX. Yes, I am aware.

Dr. GOSAR. Are you also aware that Congress did not give them that authority as well?

Mr. FOX. I am aware.

Dr. GOSAR. Are you aware of that, Attorney General Rutledge?

Ms. RUTLEDGE. Yes, Doctor.

Dr. GOSAR. Why would we continue to go down this path without going through Congress first? It defies me. Does it defy you?

Ms. RUTLEDGE. It certainly does and that is why I am here today because of the rule of law, as my colleague from Montana mentioned.

Dr. GOSAR. I sat in my office 1 day to look at the hearing over at Transportation and Infrastructure. Ms. McCarthy was very insistent that they were going to come up with this rulemaking by April.

I find it interesting that my colleague on the other side keeps saying that they are not here and they shouldn't be here because they are proposing rulemaking. That doesn't make any sense because defied by Congress and the Supreme Court from actually going there, true?

Mr. FOX. If you are asking me, I would say yes. If I might add, we actually asked, on the 111(d) rules, for the EPA to hold a listening session in Montana. We were denied that ability.

Dr. GOSAR. Ms. Tierney, I am going to go back to science. I love science. By the way, I am a dentist. I also have some botany in my background, some water and immunology aspects as well.

What would you say if you actually found out that through the EPA and their Clean Air Act, that implications on the Navajo generating station actually defied the facts of law?

Ms. TIERNEY. I literally could not hear the question.

Dr. GOSAR. What would you think, as a scientist, if the EPA and their Clean Air administration in Arizona called the Navajo generating station actually defied the rule of science? What would you say to that, being a science person?

Ms. TIERNEY. I am not a scientist. I have a Ph.D. in Regional Planning.

Dr. GOSAR. Oh, interesting. You still have outcomes and facts, right?

Ms. TIERNEY. Of course, yes.

Dr. GOSAR. If they predicated an example for a Clean Air Act based on particulates coming from a certain coal plant.

Ms. TIERNEY. I know the plant.

Dr. GOSAR. Say northeast that had implications on the Grand Canyon, which it did not, and EPA actually admitted that, would you think it was fair that those types of rules would be inferred and forced upon Arizona for lack of factual basis?

Ms. TIERNEY. One of the things you are asking me, I believe, is a legal opinion and I don't believe I am qualified to give you a legal opinion.

Dr. GOSAR. I think you are outcomes-based and you have an opinion as an individual. You are sitting in front of a committee giving your expertise. I think you are more than applicable to that. I hope you are not taking the Scott Walker application and avoiding the question.

Ms. TIERNEY. Come on, sir. I am not a lawyer. I cannot. I cannot give a legal opinion.

Dr. GOSAR. I am not a lawyer. I am also a dentist so that is why I am asking your personal opinion. Would you find it contradictive that we would use facts of science and find they are factually biased and factually false and still use those to predicate a rule?

Ms. TIERNEY. Is this a hypothetical question?

Dr. GOSAR. It is actually a true statement.

Ms. TIERNEY. I don't know the truth of it, so it is very difficult for me to answer that. I am not evading the question in any possible way.

Dr. GOSAR. Thank you, Madam Chair. I will yield back.

Ms. LUMMIS. The gentleman yields back. The Chair now recognizes the gentleman from Alabama, Mr. Palmer.

Mr. PALMER. Thank you, Madam Chair.

Dr. Tierney, I want to ask you some questions about how you intend to enforce, say, the water rule, how aggressive you are going to be on that?

Ms. TIERNEY. There must be an acoustical issue here in a bubble. Would you say your question again?

Mr. PALMER. On the water rules, EPA has been very aggressive in enforcement. It has gone from a regulatory agency to almost operating like a police State. I will be blunt about it. There have been cases where the EPA, your armed division, has shown up with body armor and weapons drawn.

Can you give me some idea of what the threat assessment might be that would justify that kind of intervention?

Ms. TIERNEY. I don't know about the particular thing you are describing, but when I was in State government, we had environment enforcement activities where we did have to go in and take control of people who were flagrantly violating the State and Federal laws. I know it does happen. I don't know about the particular case you are describing.

Mr. PALMER. Are any of the other witnesses aware of any cases where the EPA has come in with armed agents? We have had at least two of those in Alabama and one in Alaska. I find it interesting that the EPA is implementing these rules and conducting themselves in a way that is more reflective of a police State than a regulatory agency.

Ms. TIERNEY. My experience with that in the past is that other people are at risk of being exposed to hazardous pollutants and a variety of other things.

Mr. PALMER. I don't think that would justify an armed agent. If you think someone has violated a rule, I think the first thing you do is send down a regulator and interview witnesses. I know specifically of a case where that didn't happen.

They showed up in a relatively small town at their waste treatment facility. I have not been to the waste treatment facility but I am fairly certain there are no sniper towers or machine gun nests or anything there that would justify that kind of intervention.

Let us turn to the Clean Power Plan the EPA is trying to impose. It is going to be enormously costly. Have you given any thought to the fact that the Department of Energy and the EPA would like to see us go to the vast majority of our power coming from renewable, that our power grid will not support that?

Ms. TIERNEY. Sir, there is no evidence that the Clean Power Plan will be 100 percent renewable. The Department of Energy has not stood for that position, nor has the Clean Power Plan at the EPA.

EPA estimates that at the end of the day, based on their analyses, there would be 30 percent of the Nation's power produced by coal. That is part of the outlook there. The integration of renewable energy is something that today, in the absence of the Clean Power Plan, the industry is already addressing and coping with and has plans for how they will continue to cope with integration of renewable energy.

Mr. PALMER. From my perspective, it is the intention of the EPA, and I think this Administration, to eliminate fossil fuel, to shut down the coal industry. They have been fairly transparent about it.

Their plans are to have us at 80 percent renewable in the next two or three decades. Our electric grid is not designed for that. There is a study out of Cal Tech that indicates it will cost $1 trillion to upgrade our grid so it can do that.

Ms. TIERNEY. One of the wonderful things about natural gas as a fuel is it is very nimble to operate natural gas fire-powered plants. They integrate wonderfully with renewable energy projects.

A domestic fuel, like natural gas, which is so plentiful as a result of the shale gas revolution in providing low cost energy to the United States, is helping us with our grid reliability.

Mr. PALMER. Do you realize that when you talk about supplementing your renewables with natural gas, you are admitting that renewables are not a legitimate or reliable source of energy?

Ms. TIERNEY. That is absolutely not what I was saying. Both of them provide power to the grid, period.

Mr. PALMER. What we are having right now with wind turbines having to dump power because we don't have an economical way of storing power. If we go to renewable and back it up with natural gas, you are still going to have a major redesign issue for the infrastructure.

Ms. TIERNEY. One of the wonderful things going on with innovation in the United States is tremendous research right now on storage. There are breakthroughs going on in small scale, large scale storage. That is happening in a variety of different places around the country.

Mr. PALMER. There is a huge disagreement over whether or not in a timely manner, it would be an economically sound alternative.

Thank you, Madam Chair.

Ms. LUMMIS. The gentleman yields.

The Chair now recognizes the gentlelady from Michigan, Mrs. Lawrence.

Mrs. LAWRENCE. Thank you, Madam Chair.

Ms. Tierney, I feel that we are here today to talk about our environment and also to talk about human beings, the impact that it has on our quality of life.

Is it correct that the Clean Air Act requires air qualities to be required to protect public health with an adequate margin of safety?

Ms. TIERNEY. My understanding, having been an implementer of the Clean Air Act in Massachusetts for many years, is that every 5 years, the law requires the EPA to go through a process, advised by its Scientific Advisory Council, with regard to the extent to which its ambient air quality standards are adequate to protect public health.

That is the process they have gone through and have published proposals and have now revised those to tighten the ozone standard because of public health benefits that would accrue.

Mrs. LAWRENCE. I do want to be clear that today we are addressing a proposed language and proposed act. I also want to know, is it also true that the air quality standards must consider the health of groups of people considered to be most at risk, like the 7 million children with asthma and the elderly? Is that true?

Ms. TIERNEY. That is right. I believe that the tens of millions of people who suffer from respiratory disease, breathing problems, heart problems, small birth weight, is above 100 million according to the American Lung Association. We are talking about a significant portion of the population which suffers from diseases tied to air quality.

Mrs. LAWRENCE. With that being said and the law that requires we protect public health and protecting the clean air to provide these over 7 million people who are at risk, would you agree in proposing to reduce ozone levels to the range of 65 and 70 ppb that EPA is justified in relying on more than 1,000 new scientific studies which conclude that the current ozone standard is harmful to public health?

Ms. TIERNEY. I am going to answer yes, because I know the process the EPA uses to examine the literature on what scientists are saying about the quality of air and the problems it is posing. As a result of that process, the advice they have been given has been to tighten the standard from 75 to between 65 and 70 ppm.

Mrs. LAWRENCE. Madam Chair, I am going to yield the rest of my time. But I do want to say that this is about the industry, our economy, but most important in the priority of the proposed language that we are talking about, it must address the human needs and the impact on our quality of life in America and that we empower the EPA to keep the purpose of their existence, as I discussed in my opening remarks when President Nixon proposed that we do this.

Thank you.

Ms. LUMMIS. The gentlewoman yields.

If the panel will indulge another two questions from each member, we will do that now. It looks like we have assent to that, so thank you.

The Chair yields herself time to ask two questions.

The first of my questions is for Dr. Smith about the Clean Power Plan. Earlier there was a discussion talking a little bit about benefits and quantifying benefits. I want to understand a little bit about the EPA's quantification of benefits of the Clean Power Plan.

How far into the future would the rule begin to confer benefits? Are these Stated benefits global or domestic?

Ms. SMITH. The benefits for reduction in climate change risks in that rule are projected out to 2300. We are looking at a present value of damages.

Ms. LUMMIS. Not 2030?

Ms. SMITH. So 2300, 300 years from now, a little less than 300 years from 2030 when the rule is fully implemented. The damages are really out far in the future, the projected damages that are part of those benefit estimates for that rule.

The timing of the benefits is way different than the timing of the costs. We see about a 100-year to 125-year payback period before the costs that have to be spent through 2030 might be paid back in any kind of expected value of climate benefits.

Ms. LUMMIS. Thank you, Dr. Smith.

My second question is for our Attorneys General. To both of you, do your States have adequate environmental laws to handle the air quality and water quality concerns that are being addressed today by the EPA?

Ms. RUTLEDGE. Yes, Arkansas has the Department of Environmental Quality that addresses such. I believe one particular issue with the proposed rule is going beyond the authority, as I Stated earlier, what the EPA actually has authority to do which is to provide guidelines and appropriate procedures for the States.

That way, the Arkansas Department of Environmental Quality can work with the EPA in implementing those guidelines that were right for the State of Arkansas versus what the EPA is attempting to do in going beyond its authority, mandating what each State must do.

Mr. FOX. Chairman Lummis, Montana has been very proactive in taking steps legally and practically to protect the environment, air, water and everything in between. Our constitution in Article 9, Section 3, includes a specific provision giving the right to Montanans to a clean and healthful environment.

We have also enacted the Montana Water Quality Act, our own version under primacy of our Clean Air Act. I might add that I used to be an Assistant Attorney General for the Department of Environmental Quality. I am a geologist trained in environmental protection.

I was in charge of the investigation that led to the first criminal violation and prosecution of someone under our Water Quality Act in Montana which later led, actually, to Federal charges on different grounds as well.

We do a very good job. We are very thorough in making sure that we protect our environment. I think it is important to note that both the Clean Air Act and the Clean Water Act include provisions in the very beginning of both Acts stating that it is the primary responsibilities of the States and local government to regulate both water and air.

Again, under principles of cooperative federalism, I think that is where we start as a foundation. What EPA proposes to do here is way over the line and we need to get back to the basics.

I would welcome Congress debating this because I think that is truly where this discussion should be held and ultimately where it should be decided.

Ms. LUMMIS. I thank the panel.

The Chair now yields to gentlewoman from Michigan, Mrs. Lawrence.

Mrs. LAWRENCE. Ms. Tierney, I would like to ask this question. The Bureau Chief of Environmental Protection bureau recently testified that jurisdictional decisions related to the waters of the United States are made on a case by case basis, subject to factual and inconsistent legal interpretations fostering uncertainty, delay and further litigation.

Members of the EPA have Stated that they received numerous calls for clarification of waters of the United States from various stakeholders, including farmers, developers, and State and local.

In general, would you say the proposal making a process clearer, simpler and faster will benefit these stakeholders? Would you agree with that?

Ms. TIERNEY. Yes. As I said, as an administrator of Federal and State laws on the environment, it has been my experience that when there is gray area and a developer doesn't know or a private investor doesn't know how a law will be implemented in a particular case, it requires a lot of time and money to figure that out and it often does chill development.

Mrs. LAWRENCE. Would you say in this proposal that is one of the objectives, to provide clarification to the States and the stakeholders?

Ms. TIERNEY. That is my understanding of the motivation of the EPA in doing this, yes.

Mrs. LAWRENCE. I yield my time.

Ms. LUMMIS. The Chair now recognizes the gentleman from Arizona for two more questions, Dr. Gosar.

Dr. GOSAR. Dr. Smith, I have a couple of questions for you. You did a Clean Power Plan evaluation for global temperature changes. What did you find?

Ms. SMITH. I think it was about a .06 degree change in global temperature against a projected change of several degrees.

Dr. GOSAR. Was it within the margin of error?

Ms. SMITH. I have to be clear, I don't really remember the number but it was very small.

Dr. GOSAR. Point zero zero three.

Ms. SMITH. Thank you. You remember better than I do.

Dr. GOSAR. Statistically, is it an anomaly?

Ms. SMITH. It is simply not very meaningful if that is the amount of change anyone is projecting. Yet the benefits being attributed to this one rule are deriving benefits off these tiny, tiny changes.

If climate change is going to be changed in any way, very much larger increments in emissions reductions need to occur in order to get very much larger changes in temperature. That one rule does nothing. Yet benefits are being attributed to it.

The only way to get the benefits is to do far more. That rule cannot do it.

Dr. GOSAR. Interesting.

Attorney General Fox, you are a geologist. Are you aware of any climate change in our years past?

Mr. FOX. Yes, that is one of the first things we learned in school in the university, is the effect of the change in climate geologically speaking through time.

Dr. GOSAR. History tells us a lot of about that. My dad was a geologist. As soon as the sun came up, our car always slowed down and we were always talking about this period of time, right?

Mr. FOX. Yes, sir.

Dr. GOSAR. Fossils are kind of a product of that, right?

Mr. FOX. Yes, sir.

Dr. GOSAR. Coal is kind of a product of that, right?

Mr. FOX. Yes, sir.

Dr. GOSAR. Gas is a product of that, right?

Mr. FOX. Yes, sir.

Dr. GOSAR. And oil?

Mr. FOX. Yes, sir.

Dr. GOSAR. Along those same lines, Attorney General Rutledge, what kind of implications can you have on civil penalties the EPA has already started to establish? I will rephrase that a little bit. Are you aware of civil penalties that can be expounded by civil violations of the clean waters of the U.S.?

Ms. RUTLEDGE. Under the proposed rule or currently under any by the EPA, yes.

Dr. GOSAR. Some are pretty severe?

Ms. RUTLEDGE. Absolutely.

Dr. GOSAR. I am aware of a poor rancher in Wyoming that has a $75,000 penalty on a stock pond that actually followed State regulations of Wyoming ADQ. Still, the EPA thinks they run the roost. Do you find that a violation of State sovereignty.

Ms. RUTLEDGE. Absolutely, and that is the problem that as the chief legal officer of the State that I have because it prevents me from being able to protect the citizens of Arkansas. Because when you have a Federal agency such as the EPA overstepping its boundaries, insisting and implementing civil penalties on our citizens and our businesses, then we are not able to govern ourselves.

Dr. GOSAR. Would you feel the same way, Attorney General Fox?

Mr. FOX. Yes, sir.

Dr. GOSAR. Thank you.

Ms. LUMMIS. That was the longest multi-part two question effort I have ever seen. Congratulations, Dr. Gosar.

The Chair now yields to the gentleman from Pennsylvania, Mr. Cartwright.

Mr. CARTWRIGHT. Thank you, Madam Chair.

Dr. Tierney, our Ranking Member, Congresswoman Lawrence, brought up a very important point. That is, what are the human costs of what we do to our environment?

You and I talked earlier about the clean water rule and the intent of clarifying what waterways and bodies of water the Clean Water Act applies to. Under the Clean Water Act, the lack of clarity on what waters are and are not subject to the Clean Water Act protections could result in higher risk of pollution of water resources in the Nation's public health, is that a fair statement?

Ms. TIERNEY. Certainly, there are countless examples where you could find that chain of events occurring where some actions one place could have downstream effects on peoples health.

Mr. CARTWRIGHT. We have been bandying about estimates of costs for all sorts of things today. One thing I wanted to mention was the EPA estimated that the proposed rule, the clean water rule, would provide annual benefits to the public between $388 million to $514 million, which significantly outweighs the estimated costs of between $162 million to $278 million for mitigating impacts to water resources and taking steps to reduce pollution.

The benefits of this proposed rule include reducing flooding, filtering pollution, providing wildlife habitat, supporting hunting and fishing and recharging groundwater. Broadly, do you agree with those statements?

Ms. TIERNEY. I agree with those propositions. I have seen those in effect in my experience. Flooding and wetland protection is enormously important. If it is damaged from one kind of pollutant or another, you have lots of havoc when there is storm surge or other kinds of things.

Mr. CARTWRIGHT. Thank you. I am encouraged by the efforts of the EPA and the U.S. Army Corps of Engineers to clarify this definition and help make the government function more efficiently and effectively with rules that are clear and easy to follow.

Madam Chair, I do have a couple UC requests. I request unanimous consent to enter into the record a report from the National Wildlife Federation entitled statement for the Record of the National Wildlife Federation in Support of the Clean Water Act, Waters of the United States Rulemaking, dated today, February 26, 2015.

Ms. LUMMIS. Without objection, so ordered.

Mr. CARTWRIGHT. There was some discussion about whether the EPA reached out to the Crow Tribe of Montana. I ask unanimous consent to enter into the record a June 12, 2014 letter to Darrin Old Coyote, Chairman, Crow Tribe of Montana, from the United States Environmental Protection Agency.

Ms. LUMMIS. Also without objection, so ordered.

Mr. CARTWRIGHT. I yield.

Ms. LUMMIS. The Chair now recognizes the gentlelady from the Virgin Islands, Ms. Plaskett.

Ms. PLASKETT. Thank you very much for everyone's patience here this evening.

My question was actually already asked and Ms. Tierney did not have time to respond to my question to discuss some of the economic and social benefits you see from the ozone rule.

Ms. TIERNEY. Thinking of your own island is a great example. One of the reasons people are concerned about CO2 emissions is the growing concentration of those in the atmosphere and the clear evidence from the Intergovernmental Panel on Climate Change and the U.S. National Climate Assessment about the fact we are already seeing the impacts of climate change in low lying areas and along coastal regions.

For example, sea level rise and a number of other things are real impacts on local economies. There are real impacts we are already picking up. There is no way we are going to avoid some continuing impacts associated with climate change. We are only talking about taking steps in the United States to do a piece of the action.

I hear and appreciate the concerns of many people that our poorest residents around the country are facing higher electricity bills, I am also aware they are going to face higher temperatures and need for air conditioning under extreme climate change events.

We are really talking about things where we try to protect one pocket of health care costs and other kinds of costs with another piece of impact on their energy costs. The net effect of those is supposed to be these are beneficial actions that the EPA is doing to protect Americans.

Ms. PLASKETT. When you look at particularly poor communities, quite often the individuals living close to some of these places, particularly in my own area, I know there are families that have very high incidents of asthma as well as just starting to look at cancer registration from some of these plants.

Those also have an enormous economic impact on a society and a jurisdiction for having to deal with those kinds of issues. Do we measure those things in terms of these Acts?

Ms. TIERNEY. I know that EPA's studies take a great care to look at the impacts on populations that are especially poor or exposed to air quality problems which often happens in poor urban areas that are close to cars or a lot of industrial activity. Yes, those are things that are trying to be avoided.

Ms. PLASKETT. Thank you.

I just want to say our own jurisdiction has also feelings about paternalism on the part of EPA to striking the correct balance and not being unnecessarily helpful to the economy. We have to look at the long-term effects of some of these rules.

Thank you very much.

Ms. LUMMIS. I thank the gentlelady.

I too would like to enter into the record the following: The NERA Report on the Clean Power Plan; the NERA Report on the Ozone Rule, including the update that was released today; testimony regarding Waters of the U.S. Rule submitted for the record by the National Association of Realtors; testimony for the record from Thomas Easterly, Commissioner of the Indiana Department of Environmental Management; comments submitted to EPA by the Texas Commission on Environmental Quality regarding the Clean Power Plan; comments submitted to EPA by the State of Montana and the Crow Nation regarding the Clean Power Plan; and comments submitted to EPA by 11 State Attorneys General regarding the Clean Power Plan.

Without objection, so ordered.

Ms. LUMMIS. I very much want to thank our witnesses for taking the time to appear before us today. We value your expertise and the time you have spent with us helping us better understand these issues.

If there is no further business?

Mrs. LAWRENCE. I just want to say to Mr. Fox, we are going to do it this year. The Tigers are going to do it.

Mr. FOX. Tigers all the way, Ranking Member, Tigers all the way.

Ms. LUMMIS. With that, and without objection, the committee stands adjourned.

[Whereupon, at 4:40 p.m., the subcommittee was adjourned.]

APPENDIX

Material Submitted for the Hearing Record

Subcommittee on Interior of the Committee on Oversight and Government Reform Hearing 02/26/15
Examining the Impacts of EPA Air and Water Regulations on the States and the American People

Chairman Cynthia Lummis Statement (as prepared)

Good afternoon and welcome to the first hearing for the new Subcommittee on Interior of the Oversight and Government Reform Committee. I am pleased to be holding this hearing on the impact on the American people of three proposed EPA rules. Over the last year the EPA has issued rules that are unprecedented in scope, and among the most expensive in history. This overreach will impact families and businesses across the country.

The first rule that we will examine is the redefinition of the term "Waters of the United States" under the Clean Water Act. Despite two Supreme Court rulings that define the maximum reach of the Clean Water Act, the EPA has proposed a rule that will increase its regulatory authority far beyond current policy. It would allow the EPA almost unconstrained access to regulate and burden landowners with endless environmental studies. Even more disturbing the Waters of the US rule still does not provide the regulatory certainty that farmers, small businesses and homeowners need. Instead it will result in more red tape, displace local management programs and shift limited resources away from working environmental programs.

We will also examine two EPA Clean Air Act rules that would fundamentally alter the relationship between states and the federal government. These rules would result in massive consumer electricity price increases and trillions of dollars in lost economic activity. These rules are especially damaging to Wyoming where we produce over 40% of the nation's coal. They would force the retirement of coal power plants across the country, significantly increasing electricity and natural gas prices, and threatens the reliability of the electric grid.

The first of these air regulations is called the Clean Power Plan. This proposed rule would require the regulation of existing power plants and unconstitutionally expands EPA's authority into the management of states' energy generation. It does this through so called “beyond the fence measures” that regulate more than just power plants. These measures would mandate energy efficiency requirements on individual households. Compliance costs of the Clean Power Plan could be as high as 479 billion dollars by 2030 and 43 states would face double digit electricity price increases. This massive cost comes with extremely limited benefits and violates the principles of federalism.

The second air regulation we will examine is the EPA's proposal to update the air quality standards for ground-level Ozone. This benign sounding rule is actually widely considered to be the most expensive rule in the history of the United States. Independent experts estimate the total possible cost of the rule at 1.7 trillion dollars and 1.4 million job equivalents lost per year. This rule is so burdensome that some National Parks, the nation’s most pristine environments, will be found to violate the new standards.

Today we will hear from two state attorneys general who will explain the impact that these rules have on the states. They will also discuss the EPA’s utter lack of consultation with Native communities despite clear legal requirements.
We will also hear from two economists who raise significant questions about the EPA’s cost estimates. Just as importantly these economists will also testify that the EPA is systematically overestimating the benefits of these rules by double counting benefits from other rules, ignoring basic accounting practices and projecting benefits out hundreds of years.

With that I would like to thank the witnesses in advance for you testimony.

JASON CHAFFETZ, UTAH
CHAIRMAN

ONE HUNDRED FOURTEENTH CONGRESS

ELIJAH E. CUMMINGS, MARYLAND
RANKING MINORITY MEMBER

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Subcommittee on the Interior

Opening Statement
Rep. Brenda Lawrence, Ranking Member

Hearing on February 26, 2015, 2:00 p.m.
"Examining the Impacts of EPA Air and Water Regulations on the States and the American People."

Madame Chairwoman, I thank you for holding this hearing. I also want to thank our witnesses for their testimony today.

In a special message to Congress in 1970, President Nixon stated that "as concern with the condition of our physical environment has intensified, it has become increasingly clear that we need to know more about the total environment--land, water, and air. Indeed, the present governmental structure for dealing with environmental pollution often defies effective and concerted action. In proposing that the Environmental Protection Agency be set up as a separate new agency, I am making an exception to one of my own principles: that, as a matter of effective and orderly administration, additional new independent agencies normally should not be created. Because environmental protection cuts across so many jurisdictions, and because arresting environmental deterioration is of great importance to the quality of life in our country and the world, I believe that in this case a strong, independent agency is needed."

I want to start by saying that EPA was not established to be red or blue – it was established to be green. To help us protect our environment, our citizens, and our children.

First, I would like to address The Clean Water Act, which has been successful in the past decades ensuring that Americans have clean and safe water. I believe that we can all agree that clean water is vital to each of us—for our drinking supply, for safe places to swim, for healthy fish, for growing crops, for beverage manufacturing, for energy generation and for a host of other uses. The proposed EPA rule would improve the process for determining what types of water are *and are not* covered by the Clean Water Act. Contrary to the claim of detractors, the rule will clarify protection for streams and wetlands that form the foundation of the nation's water resources. It will not result in expansion of federal authority. Only waters that have been historically covered by the Clean Water Act are covered by the rule.

Turning our attention to addressing the dangers of ozone exposure is equally important. More than 1,000 new studies demonstrate the health and environmental harms of ozone. Exposure can cause difficulty breathing and airway inflammation. Ozone exposure is likely to cause premature death from lung or heart diseases. Children also suffer a disproportionate burden of ozone related health impacts because their lungs and other organs are still developing. Nearly 26 million people have asthma in the U.S., including almost 7.1 million children.

Fortunately, over 40 years ago, Congress passed the Clean Air Act to protect public health and the environment. Recently, EPA has proposed new Nation Ambient Air Quality Standards for Ozone to lower the ozone in the atmosphere from 75 parts per billion to a range of 65-70 parts per billion by the year 2030. The Clean Power Plan has also been proposed in order to limit the amount of carbon pollution power plants may emit. Likewise, the Waters of the United States rule was proposed to clarify which bodies of water are or are not covered by the Clean Water Act.

In developing these proposed rules, EPA engaged in extensive outreach to states, local government and industry to identify and address concerns. Millions of comments have been offered and are being considered before the final rule is proposed. EPA has also done a thorough job of assessing the economic and regulatory impact of the proposed rules.

That is the process Congress created for protecting the environment. And every time a new rule is proposed to protect public health and the environment, industry opposes it. The way they do that is through scare tactics. They say new health promoting regulations will be job-killing and business-destroying. Every time a new regulation is proposed, industry greets it with dire predictions of economic disaster. They file lawsuits, they lobby Congress and State governments, they sponsor studies to support their position.

Some make the same doomsday claims that have been made for decades and they follow a fairly reliable pattern: Whenever the government considers an environmental or safety regulation, manufacturers, energy companies and industry associations put out "studies" to evaluate the effects of the rules. These "studies" grossly overestimate the cost of complying with the regulation and generally understate or ignore the benefits. What's more, these "studies" inevitably conclude that the GDP will be lower and jobs or entire industries will be eliminated because of the regulation.

And history tells us that environmental regulations do not cause economic calamity. In fact, in the past forty years, the GDP has increased by 212% since the Clean Air and Clean Water Acts were enacted. Key air pollutants have been decreased by 70%. Instead of killing jobs like opponents had claimed, the pollution control industry has generated more than $300 billion in revenues and $44 billion in exports and supported 1.5 million jobs. None of the inflated costs of implementing the laws ever materialized. Industry innovated, improved and thrived in response to new demands.

There has been enormous progress in the past few decades to clean the air and water, but more work is necessary to adequately protect public health from ozone, excessive carbon dioxide and water pollution, and mitigate the effects of climate change.

I hope that we look at history and recognize the opposition of some industries is based on scare mongering. History shows us that cleaning the air and water are both good for public health AND the economy.

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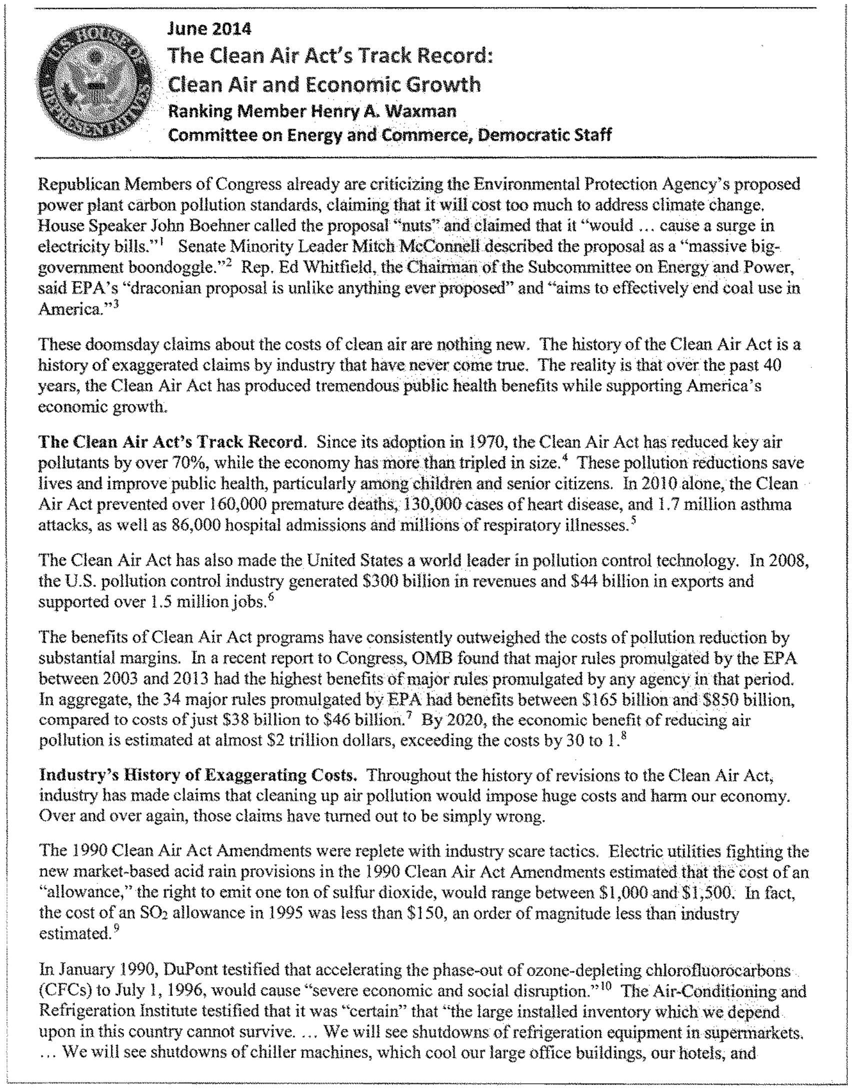

June 2014

The Clean Air Act's Track Record: Clean Air and Economic Growth

Ranking Member Henry A. Waxman

Committee on Energy and Commerce, Democratic Staff

Republican Members of Congress already are criticizing the Environmental Protection Agency's proposed power plant carbon pollution standards, claiming that it will cost too much to address climate change. House Speaker John Boehner called the proposal "nuts" and claimed that it "would … cause a surge in electricity bills."[1] Senate Minority Leader Mitch McConnell described the proposal as a "massive big-government boondoggle."[2] Rep. Ed Whitfield, the Chairman of the Subcommittee on Energy and Power, said EPA's "draconian proposal is unlike anything ever proposed" and "aims to effectively end coal use in America."[3]

These doomsday claims about the costs of clean air are nothing new. The history of the Clean Air Act is a history of exaggerated claims by industry that have never come true. The reality is that over the past 40 years, the Clean Air Act has produced tremendous public health benefits while supporting America's economic growth.

The Clean Air Act's Track Record. Since its adoption in 1970, the Clean Air Act has reduced key air pollutants by over 70%, while the economy has more than tripled in size.[4] These pollution reductions save lives and improve public health, particularly among children and senior citizens. In 2010 alone, the Clean Air Act prevented over 160,000 premature deaths, 130,000 cases of heart disease, and 1.7 million asthma attacks, as well as 86,000 hospital admissions and millions of respiratory illnesses.[5]

The Clean Air Act has also made the United States a world leader in pollution control technology. In 2008, the U.S. pollution control industry generated $300 billion in revenues and $44 billion in exports and supported over 1.5 million jobs.[6]

The benefits of Clean Air Act programs have consistently outweighed the costs of pollution reduction by substantial margins. In a recent report to Congress, OMB found that major rules promulgated by the EPA between 2003 and 2013 had the highest benefits of major rules promulgated by any agency in that period. In aggregate, the 34 major rules promulgated by EPA had benefits between $165 billion and $850 billion, compared to costs of just $38 billion to $46 billion.[7] By 2020, the economic benefit of reducing air pollution is estimated at almost $2 trillion dollars, exceeding the costs by 30 to 1.[8]

Industry's History of Exaggerating Costs. Throughout the history of revisions to the Clean Air Act, industry has made claims that cleaning up air pollution would impose huge costs and harm our economy. Over and over again, those claims have turned out to be simply wrong.

The 1990 Clean Air Act Amendments were replete with industry scare tactics. Electric utilities fighting the new market-based acid rain provisions in the 1990 Clean Air Act Amendments estimated that the cost of an "allowance," the right to emit one ton of sulfur dioxide, would range between $1,000 and $1,500. In fact, the cost of an SO_2 allowance in 1995 was less than $150, an order of magnitude less than industry estimated.[9]

In January 1990, DuPont testified that accelerating the phase-out of ozone-depleting chlorofluorocarbons (CFCs) to July 1, 1996, would cause "severe economic and social disruption."[10] The Air-Conditioning and Refrigeration Institute testified that it was "certain" that "the large installed inventory which we depend upon in this country cannot survive. … We will see shutdowns of refrigeration equipment in supermarkets. … We will see shutdowns of chiller machines, which cool our large office buildings, our hotels, and hospitals."[11] In fact, the phase-out of CFC production was accelerated to December 31, 1995, with none of the severe dislocation predicted by industry. To their credit, DuPont and other companies helped make the accelerated phase-out possible by rapidly developing alternatives to CFCs.

In May 1989, Ford Motor Company testified that "we just do not have the technology to comply" with the first tier of new tailpipe standards in the 1990 Amendments, not even with technology "on the horizon."[12] In fact, the motor vehicle industry began making vehicles that met the new standards in 1993. Engineers for the car companies now say the new standards triggered the development of sophisticated engine-control equipment, resulting in three benefits once thought incompatible: lower pollution, more power, and better fuel economy.

In October 1990, Mobil Corporation opposed the new Clean Air Act requirements for reformulated gasoline, writing that "the technology to meet these standards simply does not exist today" and predicting "major supply disruptions."[13] In fact, reformulated gasoline requirements went into effect in 1995 in the nation's most polluted cities, without significant supply disruptions.

House Republicans' Record of Unfounded Claims. Despite the Clean Air Act's 40-year record of success, Republicans in Congress have continued to claim erroneously that the nation cannot afford cleaner air and a safer climate. In April 2011, Republicans in Congress voted to block the new fuel economy standards established by the Obama Administration, arguing that they would price Americans out of the new car market.[14] Rep. Darrell Issa, Chairman of the House Oversight and Government Reform Committee, claimed that fuel economy standards would "hurt American consumers by forcing them to drive more expensive and less safe automobiles."[15] In fact, cars sales are rising, consumers are saving money, and consumer choice has been preserved.[16]

In October 2011, Republicans in Congress voted to block the Obama EPA from promulgating new mercury standards for power plants, saying the rules would cost jobs, raise electricity prices, and lead to blackouts.[17] Rep. Ed Whitfield called it "disastrous to our economy."[18] In fact, implementation has been proceeding successfully. Utilities are installing pollution controls, switching to cleaner fuels, and retiring old inefficient plants. Rolling blackouts have not occurred.

In 2012, Rep. Fred Upton, the Chairman of the Committee on Energy and Commerce described EPA's rule to reduce interstate air pollution as "just one of several new EPA rules targeting America's power sector that together will cost our economy tens of billions of dollars and put thousands of jobs at risk."[19] Rep. Ed Whitfield, the Chairman of the Subcommittee on Energy and Power, called the regulation "a costly and far-reaching rule that has already cost jobs."[20] When the Supreme Court upheld the rule this spring, Rep. Whitfield told reporters the rule "will drive up energy costs and threaten jobs and electric reliability."[21] But these claims are also proving untrue. Tom Fanning, CEO of Southern Company, a large coal-burning utility, has said the rule "will have a relatively minor effect" and require only "minimal" spending.[22] John McManus, vice president of environmental services at American Electric Power, another large coal-burning utility, said the rule would have "no immediate impact on power plants" or "change our plans for our coal-fueled power generation fleet."[23]

The President's Clean Power Plan. Now Republicans in Congress are raising the false specter of job losses and high economic costs to try to block the President from implementing his clean power plan to curb power plant carbon pollution. The history of the Clean Air Act shows that they are wrong: we can have both a clean environment and a strong economy. The President's plan to reduce carbon pollution from power plants will achieve cleaner air, better health, affordable costs, and new economic opportunities.

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[1] The Honorable John Boehner, *Statement on the President's New National Energy Tax* (Jun. 2, 2014) (online at http://boehner.house.gov/boehner-statement-on-the-presidents-new-national-energy-tax); The Honorable John Boehner, Speaker

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of the House, *Promise Made, Promise Kept: "Electricity Rates Would Necessarily Skyrocket"* (Jun. 1, 2014) (online at www.speaker.gov/video/promise-made-promise-kept-electricity-rates-skyrocket).

[2] Statement of Senate Minority Leader Mitch McConnell, Congressional Record, S3346 (Jun. 3, 2014).

[3] Rep. Ed Whitfield, *The Truth About Obama's Green Dreams*, Fox News (Jun. 17, 2014) (online at www.foxnews.com/opinion/2014/06/17/truth-about-obamas-green-dreams/).

[4] U.S. Environmental Protection Agency, *Air Quality Trends* (online at www.epa.gov/airtrends/images/y70_12_lineStyles.png) (updated 2013).

[5] U.S. Environmental Protection Agency, Office of Air and Radiation, *The Benefits and Costs of the Clean Air Act from 1990 to 2020: Summary Report*, at 14 (Mar. 2011) (online at www.epa.gov/cleanairactbenefits/feb11/summaryreport.pdf).

[6] U.S. Department of Commerce, International Trade Administration, *Environmental Technologies Industries: FY2010 Industry Assessment* (Apr. 2010) (online at http://web.ita.doc.gov/ete/eteinfo.nsf/068f3801d047f26e85256883006ffa54/4878b7e2fc08ac6d85256883006c452c/$FILE/Full%20Environmental%20Industries%20Assessment%202010.pdf).

[7] Executive Office of the President, Office of Management and Budget, *2014 Draft Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*, at 9 (online at www.whitehouse.gov/sites/default/files/omb/inforeg/2014_cb/draft_2014_cost_benefit_report-updated.pdf).

[8] U.S. Environmental Protection Agency, Office of Air and Radiation, *The Benefits and Costs of the Clean Air Act from 1990 to 2020: Summary Report*, at 2 (Mar. 2011) (online at www.epa.gov/cleanairactbenefits/feb11/summaryreport.pdf).

[9] Office of Representative Henry A. Waxman, *Clean Air: An Act That Works: The Five-Year Anniversary of the Clean Air Act Amendments of 1990* (Nov. 15, 1995) (online at http://waxman.house.gov/sites/waxman.house.gov/files/6.pdf).

[10] House Committee on Energy and Commerce, Subcommittee on Health and the Environment, *Hearing on H.R. 2699*, at 299, 101st Cong. (Jan. 25, 1990).

[11] *Id.* at 467-468.

[12] House Committee on Energy and Commerce, Subcommittee on Health and the Environment, *Hearing on H.R. 99 and H.R. 2323*, at 584, 101st Cong. (May 23, 1989).

[13] Office of Representative Henry A. Waxman, *Clean Air: An Act That Works: The Five-Year Anniversary of the Clean Air Act Amendments of 1990* (Nov. 15, 1995) (online at http://waxman.house.gov/sites/waxman.house.gov/files/6.pdf).

[14] U.S. House of Representatives, Roll Call Vote on Agreeing to H.R. 910 (Apr. 7, 2011) (255 yeas, 172 nays) (online at http://clerk.house.gov/evs/2011/roll249.xml).

[15] House Committee on Oversight and Government Reform, *Oversight Committee Leaders Statements on Flawed, Rushed CAFE Rule* (Aug. 28, 2012) (online at http://oversight.house.gov/release/oversight-committee-leaders-statements-on-flawed-rushed-cafe-rule/).

[16] *Auto Industry's Higher Sales Reflect Demand for Smaller, More Fuel-Efficient Cars*, Washington Post (Apr. 3, 2012) (online at www.washingtonpost.com/business/economy/auto-industrys-higher-sales-reflect-demand-for-smaller-more-fuel-efficient-cars/2012/04/03/gIQA0l8xtS_story.html).

[17] U.S. House of Representatives, Roll Call Vote on Agreeing to H.R. 2250 (Oct. 13, 2011) (275 yeas, 142 nays) (online at http://clerk.house.gov/evs/2011/roll791.xml); House Committee on Energy and Commerce, *Committee Leaders Concerned EPA's Utility MACT Rule Will Destroy Jobs, Make Electricity More Expensive, Less Reliable* (Dec. 21, 2011) (online at http://energycommerce.house.gov/press-release/committee-leaders-concerned-epas-utility-mact-rule-will-destroy-jobs-make-electricity).

[18] House Committee on Energy and Commerce, *Energy and Committee Leaders Respond to Growing Reliability Concerns* (Nov. 29, 2011) (online at http://energycommerce.house.gov/press-release/energy-and-commerce-leaders-respond-growing-reliability-concerns).

[19] House Committee on Energy and Commerce, *Energy and Commerce Leaders Welcome Court Decision Blocking Costly EPA Power Rule* (Aug. 21, 2012) (online at http://energycommerce.house.gov/press-release/energy-and-commerce-leaders-welcome-court-decision-blocking-costly-epa-power-rule).

[20] House Committee on Energy and Commerce, *Whitfield Commends Senate Efforts on CSAPR, Urges Senate to Take Up TRAIN Act* (Nov. 10, 2011) (online at http://energycommerce.house.gov/press-release/whitfield-commends-senate-efforts-csapr-urges-senate-take-train-act).

[21] *Court Upholds Cross-State Air Pollution Rule*, The Hill (Apr. 29, 2014) (online at http://thehill.com/regulation/energy-environment/204658-supreme-court-upholds-epa-cross-state-air-pollution-rule).

[22] *Investors in Coal-Burning Plants Brush Off Supreme Court Decision on EPA Air Rules*, Bloomberg BNA (May 2, 2014) (online at www.bloomberg.com/news/2014-05-02/investors-in-coal-burning-plants-brush-off-supreme-court-decision-on-epa-air-rules.html).

[23] *Id.*

NATIONAL WILDLIFE FEDERATION

Before the House Committee on Government Oversight and Reform Subcommittee on the Interior

Hearing on "Examining the Impacts of EPA Air and Water Regulations on the States and the American People"

Statement for the Record of the National Wildlife Federation in Support of the Clean Water Act "Waters of the United States" Rulemaking

February 26, 2015

The National Wildlife Federation (NWF) submits this statement for the hearing record in strong support of the Environmental Protection Agency ("EPA") and the Army Corps of Engineers ("Corps") Clean Water Rule defining "Waters of the United States" under the Clean Water Act. NWF represents over 4 million conservation-minded hunters, anglers, and outdoor enthusiasts nationwide. Conserving our Nation's wetlands, streams, and rivers is at the core of our mission. We have been active in advocating for Clean Water Act protections since the Act was passed in 1972. **For the reasons summarized below, we support this rigorous and transparent rulemaking and strongly oppose any legislative effort to delay or derail this much-needed Clean Water Rule.**

With the recent water pollution threats to drinking water from Ohio and West Virginia to Iowa and Montana, we would hope that the House and Senate committees of jurisdiction would convene to consider meaningful solutions to fix these pressing problems. Instead, they seem bent on providing a platform to belittle and undermine the landmark 1972 Clean Water Act. These events remind us of the high value of clean water, and crystallize the need to improve the Clean Water Act, not weaken it.

The Clean Water Act has been successful at improving water quality and stemming the tide of wetlands loss in every state. However, Clean Water Act safeguards for streams, lakes and wetlands have been eroding for over a decade following two controversial Supreme Court decisions which cast doubt on more than 30 years of effective Clean Water Act implementation.

For more than a decade now, 60 percent of stream miles in the United States, which provide drinking water for more than 117 million Americans, are at increased risk of pollution and destruction. Wetlands are at risk as well. In fact, the rate of wetlands loss increased by 140 percent during the 2004-2009 period – the years immediately following the Supreme Court decisions. This is the first documented acceleration of wetland loss since the Clean Water Act was enacted more than 40 years ago during the Nixon administration.

When wetlands are drained and filled and streams are polluted, we lose the ability to pursue our outdoor passions and pass these treasured traditions on to our children. Moreover, pollution and destruction of headwater streams and wetlands threaten America's hunting and fishing economy – which accounts for over $200 billion in economic activity each year and 1.5 million jobs, supporting rural communities in particular.

We respectfully submit this statement for the hearing record emphasizing the following key points from our formal rulemaking comments:

1. **This rule is needed and offers the best opportunity in a generation to clarify the waters that are – and are not – subject to clean water act protections.**

The Waters of the United States rule is necessary to revise the longstanding definition of "waters of the United States" subject to the Clean Water Act in light of the Supreme Court's decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers ("SWANCC")*,[1] and *Rapanos v. United States.*[2]

The final rule must address the *SWANCC* and *Rapanos* decisions in a manner that is consistent with the Clean Water Act, its goals, and the applicable aquatic ecosystem science. Such a revised regulation will establish a binding rule that will provide for restoring longstanding clean water protections, and will provide greater certainty and consistency in jurisdictional determinations for landowners, agency field staff, and the courts. Rule-making to address this definition was clearly called for by at least two of the Supreme Court Justices in their *Rapanos* concurring opinions: Chief Justice Roberts[3] and Justice Breyer.[4]

2. ***Swancc, Rapanos,* and subsequent agency guidance have created a decade-long untenable status quo of uncertainty, confusion, wasteful litigation, and lost clean water protections.**

The 2001 *SWANCC* decision was narrow. It simply precluded the Corps from asserting jurisdiction over certain ponds based solely on their use by migratory birds. It did not overturn any aspect of the existing waters of the U.S. regulatory definition, including the broad (a)(3) "other waters" provision. Nevertheless, in 2003, the Bush Administration's EPA issued SWANCC guidance (immediately effective ***without advance public notice and comment***) with an advanced notice of proposed rulemaking to potentially remove from Clean Water Act jurisdiction many non-navigable, intrastate wetlands, streams and other waters. **That spring, 39 state agencies and hundreds of thousands of individuals and organizations submitted comments urging the EPA and the Corps not to reduce the historic scope of waters protected under the Clean Water Act. Later that year, over 200 members of Congress from both parties (including Rep. Paul Ryan among others) wrote a letter to President Bush urging him "not to pursue any policy or regulatory changes that would reduce the scope of waters protected under the Clean Water Act."** In the face of such strong opposition, the Bush Administration abandoned its rulemaking to reduce the scope of waters covered by the Clean Water Act, but retained the SWANCC Guidance, effectively removing CWA protections for an estimated 20 million so-called "isolated" wetland acres.

In 2006, in *Rapanos*, the Supreme Court issued a fractured (4-1-4) decision involving wetlands adjacent to non-navigable tributaries of traditional navigable waters. Importantly, the Court issued five opinions, none of which garnered a majority. **Recognizing the confusion wrought by their fractured decision, three of the various opinions urged the agencies to initiate a rulemaking clarifying the "waters of the U.S". While the federal courts await a revised waters of the U.S. rule, federal court litigation on "Waters of the U.S" mounts in the wake of *Rapanos*, leading to costly litigation, uncertainty, delay, and hampered Clean Water Act enforcement.**

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[1] 531 U.S.159 (2001).

[2] 126 S. Ct. 2208 (2006).

[3] 547 U.S. at 757-58.

[4] 547 U.S. at 812.

In 2007, the Corps and the EPA issued its *Rapanos* Guidance, again ***without advance notice and public comment.*** The agencies amended this guidance in December 2008. **This guidance imposes a confusing and burdensome case-by-case jurisdictional requirement on most wetlands and streams. The 2008 guidance is contrary to sound science and creates an unworkable, time-consuming, expensive process that unnecessarily burdens decision makers and applicants.**

From 2002 through 2010, bills languished in Congress that would have amended the Clean Water Act to clarify the Act's jurisdiction over the Waters of the United States. The Clean Water Restoration Act (CWRA) would have restored the historical scope of the Clean Water Act to those waters protected by the Act prior to the 2001 SWANCC decision, but would not have expanded the scope of jurisdiction beyond those covered at that time.

3. **At stake in this rulemaking are millions of stream miles and wetland acres, drinking water supplies for 117 million Americans, healthy waters to support a healthy economy, and the effectiveness of the Clean Water Act itself.**

The 2003 *SWANCC* Guidance and the 2008 *Rapanos* Guidance have placed millions of wetland acres and tens of thousands of stream miles at risk of pollution and destruction. Given the interrelationship between waters, the existing Guidance has put all of the Nation's waters at risk by retreating from the comprehensive protections needed to achieve the Act's goals. The resources most at risk of losing the Act's protections as a result of the existing guidance are intermittent and ephemeral streams, many wetlands adjacent to such streams and other tributaries, and wetlands and other so-called "isolated" waterbodies that are not adjacent to tributaries.

EPA has estimated that intermittent or ephemeral streams comprise fifty-nine percent of all streams miles in the United States, excluding Alaska.[5] In the arid west, as much as ninety-six percent of all stream miles in some states are intermittent or ephemeral.[6] These headwater, intermittent, and ephemeral waters feed the public drinking water supplies of an estimated 117 million Americans.[7]

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[5] Letter from Benjamin H. Grumbles, Assistant Administrator, U.S. Environmental Protection Agency to Jeanne Christie, Executive Director, Association of State Wetland Managers (Jan. 9, 2006) [mistakenly date stamped Jan. 9, 2005] at 2.

[6] *See, e.g.*, Letter from Stephen A. Owens, Director, Arizona Department of Environmental to Benjamin H. Grumbles, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency (December 5, 2007) at 2 (describing the quality and function of surface waters in Arizona) (submitted as comments on the Guidance).

[7] U.S. Envtl. Protection Agency, Geographic Information Systems Analysis of Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S (State-by-State) and (County-by-County), http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (last visited 7/19/11).

Moreover, twenty million acres of wetlands in the lower forty-eight states are considered "isolated."[8] Many more acres are adjacent to small streams that are not navigable, and therefore at risk. According to the most recent national wetlands status and trends report, since 2004 the rate of wetland loss has increased by 140% over the previous report period. This is the first acceleration of wetland loss over a 50-year period, and the first since the passage of the 1972 Clean Water Act. This is the first study period occurring entirely post-*SWANCC*, and the U.S. Fish and Wildlife Service notes that the acceleration of wetland loss is likely at least partially explained by the jurisdictional confusion and the withdrawal of CWA protections by the agencies in the wake of the *SWANCC* and *Rapanos* cases.[9]

Science has demonstrated that these waters that are losing protection are some of the most important waters to maintaining the integrity and health of larger waters and the aquatic ecosystem as a whole. If they are polluted, degraded or destroyed, the health of wildlife and people that depend on these resources will suffer. Wetlands also help combat global warming and their preservation as habitat, sources for water storage, flood control and the like will be vital to the ability of wildlife to adapt to the challenges of a warming planet.[10]

On a practical level, the 2008 Guidance has resulted in delays, confusion and uncertainty for applicants seeking permits along with increased workloads for Corps and EPA officials. EPA's costs to enforce CWA 402, 404, and 311 have increased significantly due to the incremental resources required to assert jurisdiction post *SWANCC* and *Rapanos*.[11] Because it can be difficult to establish where the CWA applies after the Supreme Court's decisions in *SWANCC* and *Rapanos*, enforcement efforts have shifted away from small streams high in the watershed where jurisdiction is a potential issue. **Post-*Rapanos* uncertainty and added time and expense is undermining Clean Water Act enforcement and the overall effectiveness of the Clean Water Act in maintaining and restoring the nation's waters.**

4. **The clean water rule is the product of four years of rigorous and transparent scientific and public policy deliberation and offers the best chance in a generation to clarify the "Waters of the United States."**

In the face of congressional inaction, in 2011, EPA and the Corps formally launched an administrative effort to clarify the "waters of the U.S." **The 2011 Proposed Guidance was the subject of extensive interagency review, economic analysis, and public notice and comment. Approximately 250,000 comments were submitted on the guidance, and these**

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[8] *See* Pianin, Eric, *Administration Establishes New Wetlands Guidelines: 20 Million Acres Could Lose Protected Status, Groups Say*, WASHINGTON POST, pg. A5 (Jan. 11, 2003) (in discussing the 2003 agency guidance concerning *SWANCC* and so-called isolated wetlands, it states, "The new [guidance] would shift responsibility from the federal government to the states for protecting as much as 20 percent of the 100 million acres of wetlands in the Lower 48 states, according to official estimates.").

[9] DAHL, T.E. 2011. Status and trends of wetlands in the conterminous United States 2004 to 2009, at 16 U.S. Department of the Interior; Fish and Wildlife Service, Washington, D.C. 108 pp.

[10] *See, e.g.*, EPA National Water Program Strategy 2012: Response to Climate Change (Goal 6) http://water.epa.gov/scitech/climatechange/upload/epa_2012_climate_water_strategy_full_report_final.pdf.

[11] *See* 2014 EPA Economic Analysis at 30-31, at: http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf.

overwhelmingly supported the revised guidance.

In 2011-2012, on a parallel track, the EPA Office of Research and Development compiled a draft science report, *The Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (Connectivity Report).[12] This scientific report, based on peer-reviewed literature and an additional review by independent scientists, was prepared to inform the Administration's proposed rule clarifying which waters are protected under the Clean Water Act.

In July 2013, the EPA Science Advisory Board (SAB) launched an SAB Expert Scientific Peer Review of the Connectivity Report.[13] In September 2013, the agencies released the Draft Connectivity of Streams and Wetlands Science Report for public comment. Also in September 2013, after holding up action on the Clean Water guidance in the Office of Management (OMB) for almost two years, the Administration sent its draft proposed Clean Water Rule to OMB for interagency review.

In March 25, 2014, after months of interagency review, the EPA and the Army Corps of Engineers jointly proposed the formal rule clarifying and partially restoring the historic scope of waters protected under the Clean Water Act. The 2-page proposed rule text in the federal register is thoroughly explained and supported by a lengthy preamble, including both scientific and legal appendices, the publicly available Connectivity Science Report, and a thorough Economic Analysis. **The 200-day public comment period ended November 14, 2014.[14] Americans submitted over 1 million comments on the proposed rulemaking, and these comments were overwhelmingly in support of the rulemaking.**

In late September-early October 2014, the SAB issued reports affirming the scientific basis for the proposed rule (SAB Rule Letter) [15] and affirming – with recommendations for enhancing – the scientific accuracy of the Connectivity Report (SAB Connectivity Peer Review Letter).[16] The Connectivity Report was revised and strengthened in accordance with the SAB recommendations and was released in final form in January 2015.[17] **Both the SAB report and**

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[12] *See* Draft Connectivity Report (September 2013) at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/7724357376745F48852579E60043E88C/$File/WOUS_ERD2_Sep2013.pdf.

[13] *See* SAB Peer Review process at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Watershed%20Connectivity%20Report!OpenDocument&TableRow=2.1#2.

[14] *See* EPA Waters of the U.S. rulemaking process materials at: http://www2.epa.gov/uswaters.

[15] EPA SAB letter to Administrator McCarthy, *Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act"* (September 30, 2014) (SAB Rule Letter) at: http://yosemite.epa.gov/sab/sabproduct.nsf/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf

[16] EPA SAB letter to Administrator McCarthy, *SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (October 17, 2014) (SAB Connectivity Peer Review Letter) at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf

[17] *Final EPA Report: Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (January 2015) at: http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=296414#Download

the Final Connectivity Report will inform the agencies' final "waters of the U.S." rule.

Throughout 2014, EPA has held hundreds of stakeholder meetings, including repeated meetings with agricultural and municipal and other stakeholders seeking improved clarity in the rulemaking. The EPA and the Corps prepared thoughtful responses to clarifying questions about agricultural concerns raised in the letter from Senate Agriculture Committee Chair Debbie Stabenow and 13 other Senators. As EPA Administrator McCarthy has noted, this is a positive dialogue that will make the rule better while still allowing the proposal to move forward to provide solutions for the nation's pressing water problems. We applaud the agencies' efforts to reach out to landowners to improve the clarity of the final rule, clearly distinguishing between regulated tributaries on the one hand, and excluded ditches, gullies, and rills on the other.

This rigorous and transparent proposed rulemaking process offers the best opportunity in a generation to clarify which waters are – and are not – waters of the U.S. subject to the Clean Water Act in a manner that provides more clarity than ever before. This rulemaking is informed by over 30 years of agency field experience, by the most comprehensive synthesis of stream and wetland connectivity science ever compiled, and by well over one million public comments.

We urge members of Congress to respect this rigorous and transparent rulemaking process and allow the agencies to move without further delay to finalize a strong final rule, consistent with the rule's foundations in the connectivity science, the goals of the Clean Water Act, and the Kennedy significant nexus jurisdictional standard. Until that final rule is in place, the 2003 and 2008 guidance documents and the lack of a clear jurisdictional standard for judicial review continue to require cumbersome, confusing, and resource intensive case-specific jurisdictional determinations. And millions of stream miles and wetland acres, drinking water supplies for 117 million Americans, healthy waters to support a healthy economy, and the effectiveness of the Clean Water Act itself all remain at risk.

5. For the first time, the proposed rule is expressly excluding many ditches and other water features from CWA jurisdiction.

In the interest of increasing clarity and certainty about the scope of the Clean Water Act, we support the agencies' proposed list of waters to be explicitly excluded from jurisdiction by rule. We support the agencies' proposal to explicitly exclude erosional and artificial water features such as gullies, rills, non-wetland swales, small ornamental waters, water-filled depressions incidental to construction activity, among others. Expressly making these kinds of waters non-jurisdictional by rule should help convey clarity and address many of the concerns of important segments of the landowning public and, in particular, the farming and ranching communities.
The proposed rule goes further in excluding waters than previous regulatory guidance has gone as set forth in the Corps' 1986 preamble language at 51 Fed. Reg. 41206, 41217 (November 13, 1986) and the 1988 EPA preamble language at 53 Fed. Reg. 20764 (June 6, 1988).

6. Clarifying and restoring clean water act protections fosters strong local economies and millions of jobs.

EPA's conservative economic analysis demonstrates that this rule clarifying and restoring clean water protections is good for the economy. "Overall, a comparison indicates that the benefits justify the costs of this proposed action."[18] EPA's estimated annual indirect benefits of $300.7 million to $497.6 million are based primarily on estimates of ecosystem services flowing from protected or mitigated aquatic resources as a result of this increased compliance, as well as government savings on enforcement expenses:

> Benefits that accrue from this action include the value of the many ecosystem services provided by the small streams, wetlands, and other open waters protected by the many CWA provisions that would apply to them. These waters **provide habitat and biodiversity, support recreational fishing and hunting, filter sediment and contaminants, reduce flooding, stabilize shorelines and prevent erosion, recharge ground water, and maintain biogeochemical cycling.** Other benefits include **government savings on enforcement expenses** through reduced need for costly jurisdictional determinations where jurisdiction has been unclear under the current interpretation of the existing regulation. **Business and government may also achieve savings from reduced uncertainty in where CWA jurisdiction applies.** *Id.* at 32. (Emphasis added).

The agencies' benefit estimates are solidly supported by other economic analyses. Costanza et al (2014) estimated that the value of ecosystem services for "inland wetlands" averaged $25,682/ha/yr. The value of the services provided by the navigable waters themselves (included within "rivers and lakes") averaged only $4,267/ha/yr.

Healthy wetlands and streams are economic engines for local recreation-based economies. Every year 47 million Americans head to the field to hunt or fish. For example, the American Sportfishing Association reports that **anglers generated more than $201 billion in total economic activity in 2011, supporting more than 1.5 million jobs.**[19] The U.S Fish and Wildlife Service estimated that duck hunting in 2006 had a positive economic impact of more than $2.3 billion, supporting more than 27,000 private sector jobs.[20]

In some rural, mountain communities, river recreation and related activities generate the largest share of the local economy. Indeed, throughout the headwaters states, river recreation, including boating, fishing and wildlife watching, represent billions of dollars in commerce.[21] **In the Colorado River Basin portion of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, 2.26 million people participated in water sports in 2011, spending $1.7 billion that generated $2.5 billion in total economic output.**[22]

Another indication of the economic implications of protecting the Nation's water resources is revealed in the example of the actions taken by New York City to initiate a $250 million program to acquire and protect up to 350,000 acres of wetlands and riparian lands in the Catskill Mountains to protect the quality of its water supply rather than constructing water treatment plants which could cost as much as $6-8 billion. (Dailey et al. 1999). In South Carolina, a study showed that without the wetland services provided by the Congaree Swamp, a $5 million wastewater treatment plant would be required (http://water.epa.gov/type/wetlands/people.cfm).

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[18] Economic Analysis of Proposed Revised Definition of Waters of the United States (March 2014) at 32.

[19] American Sportfishing Association, *Sportfishing in America* (January 2013).

[20] Economic Impact of Waterfowl Hunting in the United States, Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, November 2008. US Fish and Wildlife Service.

[21] Western Resource Advocates 2014 Rule Comments.

[22] Southwick Assoc., Economic Contributions of Outdoor Recreation on the Colorado River & Its Tributaries (May 3, 2012) (Table E-3), *available at* http://protectflows.com/wp-content/uploads/2013/09/Colorado-River-Recreational-Economic-Impacts-Southwick-Associates-5-3-12_2.pdf.

The algal blooms that cause health problems also come at high economic costs. **For example, Dodds et al (2009) estimated that the total annual cost of the eutrophication of U.S. freshwaters was $2.2 billion.** This estimate included recreational and angling costs, property values, drinking water treatment costs, and a conservative estimate of the costs of the loss of biodiversity. Polasky and Ren (2010) cited research that estimated that if two lakes (Big Sandy and Leech) in Minnesota had an increase in water clarity of three feet, lakefront property owners would realize a benefit of between $50 and $100 million.

By any measure, clarifying and restoring clean water protections for America's waters is a good investment for healthy communities and a healthy economy.

CONCLUSION

National Wildlife Federation strongly supports this historic "waters of the United States" rulemaking as necessary and the best chance in a generation to clarify which waters are – and are not – "waters of the United States" protected by the 1972 Clean Water Act. We urge Congress to respect the agencies rulemaking and allow them to finalize this much-needed rule without further delay. We look forward to a final rule in 2015 that will provide greater long-term certainty for landowners and advance our collective efforts to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

Respectfully Submitted,

Jan Goldman-Carter
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

June 12, 2014

Darrin Old Coyote
Chairman
Crow Tribe of Montana
PO Box 169
Crow Agency, Montana 59022

Dear Tribal Leader:

The purpose of this letter is to provide you with updated information on the U.S. Environmental Protection Agency's proposed Clean Power Plan for Existing Power Plants. This plan requires states to adopt plans to address greenhouse gas emissions from existing fossil fuel-fired electric generating units. Specifically, the EPA is proposing specific emission rate goals for reducing carbon dioxide emissions from the power sector, as well as guidelines for states to follow in developing plans to achieve the goals. This rule, as proposed, would continue progress already underway to reduce carbon dioxide emissions from existing fossil fuel-fired power plants in the United States.

States can develop a state-only plan or collaborate with each other to develop plans on a multi-state basis to meet the proposed goals. The EPA did not propose emission rate goals or planning guidelines for the four affected sources located in Indian country at this time. The EPA will work with those tribes and sources to develop or adopt Clean Power Plan programs.

In addition to affecting those specific tribes who have sources located in Indian country, the proposed rule requires states to develop plans that will affect generating units located near Indian country. In addition, we are aware of tribes that are interested in developing or have developed energy sources including solar and wind power and maybe interested in how their sources can and should be factored into the attainment of these goals. For this reason the agency believes it is important to offer consultation with federally recognized tribes on the many aspects of this rule, including how we set the state goals, how we should establish goals for sources in Indian country, and how tribes can engage with states as they implement the proposed national guidelines. We invite you to consult with the EPA, should you believe that your tribe could be affected by this proposal. I had previously extended an offer of consultation during our extensive public consultation process that began in 2013. Now that we have proposed the Clean Power Plan for public comment, I would like to renew our offer for further consultation during this public comment period.

The EPA expects the proposed rules to improve environmental protection within Indian country and nationwide. However, to ensure that your lands and interests are protected, we are prepared to consult with you or your designee should you desire. To initiate government- to- government consultation with the EPA, please contact Angela Hackel at (919) 541-5262, e-mail: hackel.angela@epa.gov or Toni Colón at (919) 541-0069, e-mail: colon.toni@epa.gov. If you desire government-to-government consultation with the EPA, we kindly request that you notify us by July 14, 2014.

We have enclosed a copy of a fact sheet outlining our action. Also for more information on the rule please visit: http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule. We request your input to assure we promulgate the best guidelines possible. We endeavor to conduct our efforts with sensitivity to the needs and culture of your tribe and with attention to the potential impact of our actions. We look forward to receiving your input.

Sincerely,

P. Tsirigotis

Peter Tsirigotis
Director
Sector Policies and Programs Division

Enclosure
EPA Fact Sheet - Clean Power Plan- the Role of States

cc: Tribal Environmental Director
Tribal Environmental

2014-07-31 NERA Economic Consulting "***Assessing Economic Impacts of a Stricter National Ambient Air Quality Standard for Ozone***" can be found here:

http://www.nera.com/content/dam/nera/publications/2014/PUB_NERA_NAM_Ozone_Report_0714.pdf

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2014-10-16 NERA Economic Consulting "***Potential Impacts of the EPA Clean Power Plan***" can be found here:

http://www.nera.com/content/dam/nera/publications/2014/NERA_ACCCE_CPP_Final_10.17.2014.pdf

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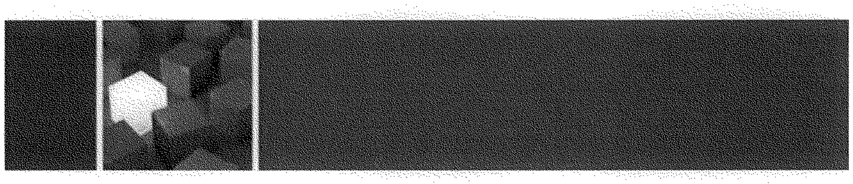
2015-02-26 NERA Economic Consulting "***Economic Impacts of a 65 ppb National Ambient Air Quality Standard for Ozone***" can be found here:

http://www.nera.com/content/dam/nera/publications/2015/NERA_NAM_Ozone%20Report_Final_0215.pdf

NERA
ECONOMIC CONSULTING

Economic Impacts of a 65 ppb National Ambient Air Quality Standard for Ozone



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National Association of Manufacturers

February 2015

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ECONOMIC IMPACTS OF A 65 PPB NATIONAL AMBIENT AIR QUALITY STANDARD FOR OZONE

This study evaluates the potential compliance costs and impacts on the U.S. economy if the U.S. Environmental Protection Agency (EPA) were to set a National Ambient Air Quality Standard (NAAQS) for ozone of 65 parts per billion (ppb). Employing our integrated energy-economic macroeconomic model (N_{ew}ERA), we estimate that the potential emissions control costs could reduce U.S. Gross Domestic Product (GDP) by about \$140 billion per year on average over the period from 2017 through 2040 and by about \$1.7 trillion over that period in present value terms.[1] The potential labor market impacts represent an average annual loss employment income equivalent to 1.4 million jobs (*i.e.*, job-equivalents).[2]

These results represent updated values from the results in our July 2014 report (NERA 2014), which developed estimates of the potential costs and economic impacts of achieving a 60 ppb ozone standard using the best information then available. In November 2014, the U.S. Environmental Protection Agency (EPA) released updated emissions and cost information supporting their proposal to revise the ozone standard (EPA 2014a); we have used that new information to update our analysis. Also, given that the proposed rule suggests setting a revised ozone NAAQS in the range of 65 ppb to 70 ppb, in this update we assess the economic impacts of a potential 65 ppb ozone NAAQS. This report begins with a summary of the differences between the information and methodology in our July 2014 report and those used in this updated study. It then provides summaries of our estimates of the costs and economic impacts of attaining a potential ozone NAAQS of 65 ppb.

Changes in Data and Methodology Since the July 2014 Report

The methodology used for this study is largely similar to the methodology used in our July 2014 report. This section discusses changes to the three components of our analysis:

1. *The methodology for estimating emission reductions*. This study used updated EPA information on the future NO_X and VOC emissions levels needed to comply with a potential 65 ppb standard (rather than a 60 ppb standard as in our July 2014 report).

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[1] All dollar values in this report are in 2014 dollars unless otherwise noted. The present value reflects impacts from 2017 through 2040, as of 2014 discounted at a 5% real discount rate; this discount rate falls in the 3% to 7% range recommended in EPA's *Guidelines for Preparing Economic Analyses* (2010a, p. 6-19), and it is consistent with the discount rate used in the N_{ew}ERA model.

[2] "Job-equivalents" is defined as total labor income change divided by the average annual income per job. This measure does not represent a projection of numbers of workers that may need to change jobs and/or be unemployed, as some or all of the loss could be spread across workers who remain employed, thereby impacting many more that 1.4 million workers, but with lesser impacts per worker.

Additionally, we used updated cost and effectiveness information about emission controls that have been identified by EPA.

2. *The methodology for estimating compliance costs.* We updated the costs of the known controls that EPA identified to attain the 65 ppb standard using EPA's new cost data. However, even for a 65 ppb standard, more than half of the emissions reductions needed across the country would come from measures that EPA still has not identified. Using the same evidence-based approach for developing a cost curve that we used in our July analysis (but using the more recent inventory data, and updating the calculations for a later year of compliance spending), we calculated the costs of the set of further emissions reduction needs that EPA has left unidentified in its current analysis. We also updated all dollar figures from 2013 to 2014 dollars.

3. *The methodology for estimating economic impacts.* We used the same version of NERA's N_{ew}ERA macroeconomic model as our previous study to estimate the economic impacts of our estimated costs for reducing emissions in the amount necessary to attain a 65 ppb ozone standard. In contrast to EPA's analysis, we excluded the proposed EPA Clean Power Plan rule from our modeling baseline.

In our July 2014 report, we performed a sensitivity analysis on the possibility that nonattainment, especially in rural areas of the U.S., could create barriers to continued growth in oil and gas extraction. A national policy question that remains in a state of flux is whether or not new permitting requirements hinder growth in energy production. A tightened ozone standard has the potential to cause nonattainment areas to expand into relatively rural areas, where there are few or no existing emissions sources that could be controlled to offset increased emissions from new activity. If nonattainment expands into rural areas that are active in U.S. oil and gas extraction, a shortage of potential offsets may translate into a significant barrier to obtaining permits for the new wells and pipelines needed to expand (or even maintain) our domestic oil and gas production levels. The sensitivity analysis in our July 2014 report resulted in much larger natural gas price effects, and raised macroeconomic impacts of our base case by about 30 to 50%. Limitations of time have prevented us from conducting a similar sensitivity analysis for this update.

Methodology for Estimating Emission Reductions

The July 2014 report relied on projected 2018 baseline VOC and NO_X emissions and EPA information from its 2008 and 2010 Regulatory Impact Analyses (RIAs) to estimate reductions required for all regions of the U.S. to come into compliance with a 60 ppb standard. The updated EPA information that we rely on in this study includes projected 2018 and 2025 base case and baseline emissions as well as EPA's estimates of reductions required from the 2025 baseline emissions to achieve a 65 ppb standard (EPA 2014a-g). We use the updated EPA estimates of state-by-state emissions reductions from the 2025 baseline as the principal basis for our estimates of NO_X emissions levels that would allow a 65 ppb standard to be attained nationwide.[3] In order to reach and maintain this level of NO_X emissions consistent with a 65 ppb ozone concentration, states would need to reduce emissions at existing sources and prevent any *net* increases in emissions from new or expanded sources. We also rely on EPA's revised data on the cost of emissions reductions for "known" control measures, which are provided by source sector and state.

Our methodology for estimating costs of emission reductions is similar to our July 2014 study. In both studies, we substituted our base case estimates of electricity generating unit (EGU) emissions for those of EPA, for consistency with our economic impact model, which estimates costs from EGU emissions reductions endogenously. As before, we adopted EPA's cost estimates for those controls that EPA identifies as "known"—that is specific controls for which EPA had developed emission reduction and cost information—and we applied our own more evidence-based approach for estimating costs for the many required reductions that EPA treats as "unknown." For estimating the impacts to the U.S. economy of our estimates of compliance costs, we assigned each state's projected cost to specific calendar years, using assessments of their likely attainment dates. Also consistent with our prior study, we assigned the costs to specific sectors in each state; for the "known" control measures these assignments were based on the sector-specific information available in EPA's data and for the "unknown" control measures, these assignments were based on emissions inventory data on the relative contribution of each source category to the remaining emissions in each state.

Methodology for Estimating Compliance Costs

Our methodology for developing estimates of compliance costs in this study is the same as in our July 2014 report, although of course the numerical values are different reflecting the additional information now available. As noted, EPA developed updated estimates of the annualized costs from "known" controls, and we used this updated information on "known" controls.

As in the July 2014 analysis, emission reductions from "known" controls were not sufficient to achieve attainment, in this case with a 65 ppb ozone standard. EPA has filled the gap with a rough estimate of costs of "unknown" controls, *i.e.*, controls for which no cost information was developed. In contrast to the two cost estimation methodologies presented in its 2008 and 2010 RIAs, this time EPA used a single simplistic assumption that annualized control costs for these "unknown" controls would be equal to $15,000 per ton, regardless of the state, the sector, or the amount of emission reduction required. This estimate was not based upon any evidence-based analyses of the nature of the emissions that remain after "known" controls are in place, or of the costs of potential additional controls for these sources.

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[3] We focused our analysis on NO_X emissions, but we also included EPA's estimates of VOC emission control costs in our modeling.

Our compliance cost estimates are based upon a synthesis of EPA estimates of emission reduction, our modifications of EPA's assumptions regarding baseline reductions, EPA's estimates of the costs of "known" controls, and our more detailed estimates of the costs of "unknown" controls. As in our July 2014 report, our "unknown" cost estimates are more evidence-based than EPA's, as we use detailed information on the types of sources that account for the remaining emissions (EGUs, other point sources, on-road sources, off-road mobile sources, and area sources) as well as estimates of the potential costs of reducing emissions by scrapping existing emission sources prematurely. We updated our estimates of the costs of scrapping light-duty motor vehicles using up-to-date information. We also used updated information to assess the implications of these dollar-per-ton values for the marginal cost curve for reductions needed to achieve compliance. As in the July 2014 study, the result is a set of estimates of the costs for each state to comply with a more stringent ozone standard based upon the use of specific information to assess "unknown" control costs.

Methodology for Estimating Economic Impacts

Our methodology for estimating economic impacts of the estimated costs of compliance with a 65 ppb ozone standard is the same as in the July 2014 study for a 60 ppb standard, using NERA's N$_{ew}$ERA macroeconomic model. In the N$_{ew}$ERA model, expenditures on emissions control measures to comply with a new ozone standard reduce investment in other productive sectors of the economy, which results in decreases in economic output in subsequent years. The capital costs associated with compliance spending are assumed to be incurred from 2017 until 2036 (the last projected compliance date, for extreme areas), while each state's estimated operating and maintenance (O&M) costs are incurred for all years after the state's attainment date. Our economic impact analysis accounts for the effects of costs projected to be incurred through 2040.

N$_{ew}$ERA is an economy-wide integrated energy and economic model that includes a bottom-up, unit-specific representation of the electric sector, as well as a representation of all other sectors of the economy and households. It assesses, on an integrated basis, the effects of major policies on individual sectors as well as the overall economy. It has substantial detail for all of the energy sources used by the economy, with separate sectors for coal production, crude oil extraction, electricity generation, refined petroleum products, and natural gas production. The model performs its analysis with regional detail. As discussed above, this particular analysis uses state-specific cost inputs, and N$_{ew}$ERA has been run to assess economic impacts for each state. Appendix A of the July 2014 report provides a detailed description of the N$_{ew}$ERA model.

The macroeconomic analysis requires a baseline that projects economic outcomes in the absence of the incremental spending to attain the tighter ozone NAAQS. For this study, N$_{ew}$ERA's baseline conditions were calibrated to reflect projections developed by Federal government agencies, notably the Energy Information Administration (EIA) as defined in its *Annual Energy Outlook 2014* (*AEO 2014*) Reference case. This baseline includes the effects of environmental regulations that have already been promulgated as well as other factors that lead to changes over time in the U.S. economy and the various sectors. Our baseline does not include the effects of proposed regulations, such as the Clean Power Plan (CPP), although we do include power sector closures as an available way to attain the NAAQS, to the extent that we find such closures to be cost-effective elements of each state's control strategy.[4]

The July 2014 report and appendices provide details on the various aspects of our methodology, subject to the changes noted above. Although this report describes results for the United States as a whole and disaggregated to 11 regions,[5] the inputs and the results are built up using detailed state-specific and sector-specific cost information. The costs and impacts of a more stringent ozone standard differ substantially among states.

Summary of National Results

Emission Reductions Required to Achieve a 65 ppb Ozone Standard

As Figure S-1 illustrates, national NO_X emissions have already been reduced substantially, from about 25.2 million tons in 1990 to 12.9 million tons in 2013 (EPA 2014b). EPA currently projects that U.S. NO_X emissions will be further reduced by existing rules and regulations to 8.2 million tons by 2025 (supplemented with N_{ew}ERA's projected baseline EGU emissions, which does not include the proposed CPP). Those additional emissions reductions between 2013 and 2025 will involve costs beyond the compliance costs estimated in this study. Economic activity (as measured by real GDP) in 2025 is projected to be more than double the level in 1990 (CEA 2014, Table B-3 and OMB 2013, Table 2), suggesting that U.S. NO_X sources will have been controlled by more than 80% by 2025, without the additional controls needed to attain a tighter ozone NAAQS.

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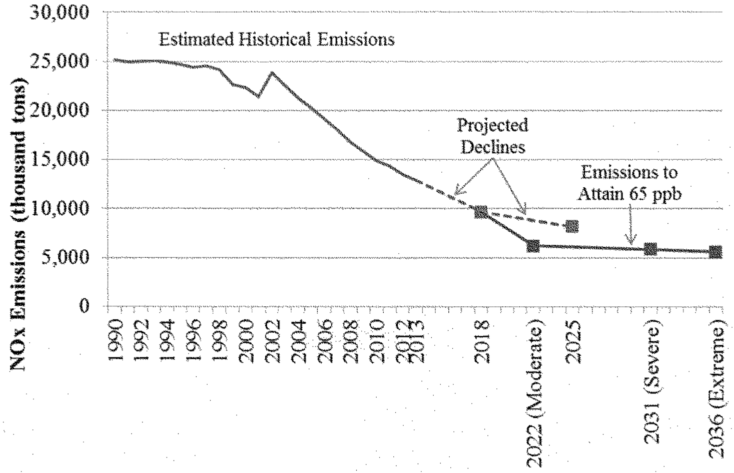
[4] EPA's inclusion of the CPP in its baseline was inconsistent with its standard practice of only including promulgated regulations. This deviation from standard procedure seems particularly unjustified given the enormous uncertainty in what carbon limits may actually be applied and how states would comply, and hence what NO_X emission reductions might actually occur as a result of this carbon regulation.

[5] "U.S." results are, formally, only for the lower 48 states, and exclude Alaska and Hawaii, as well as Washington DC. We refer to the lower 48 states as "U.S." hereafter.

Figure S-1: U.S. NO_X Emissions to Attain 65 ppb NAAQS Compared to Historical NO_X



Notes: Blue solid line: Estimated historical emissions.
Blue dotted line: Projected further declines through 2018 and 2025 (linear interpolation).
Red line: Emissions to attain 65 ppb on attainment schedule, with states not requiring reductions for 65 ppb held constant after 2025.
The slight increase in U.S. NO_X emissions from 2001 to 2002 primarily reflects changes in EPA's emission modeling methodology for onroad and nonroad sources (switching from MOBILE6 to the National Mobile Inventory Model and MOVES)

Source: NERA calculations as explained in text

Based on the EPA information, total U.S. NO_X emissions would have to be reduced to about 6.2 million tons by 2022 and 5.6 million tons by 2036 to meet a 65 ppb standard throughout the nation. This reduction appears as the red line above in Figure S-1, which also shows our prognosis of the timing of those reductions, based on our estimates of the likely severity classifications of the different states.[6]

Figure S-2 shows our estimates of emissions and emission reductions for the 34 states that would not attain a 65 ppb under baseline conditions. Despite the extensive controls already expected to occur in the future, we estimate that about 2.6 million additional tons (in aggregate) would need to be eliminated by 2022 and an additional 300,000 tons would need to be eliminated by 2036 in order for those states to come into attainment on schedule. This is equivalent to roughly another 25% reduction from the reduction estimated solely based on those states' 2025 NO_X emissions. It implies almost a 90% total reduction from all sizes and types of NO_X-emitting sources from the relatively uncontrolled emissions rates in 1990 (after adjusting for growth).

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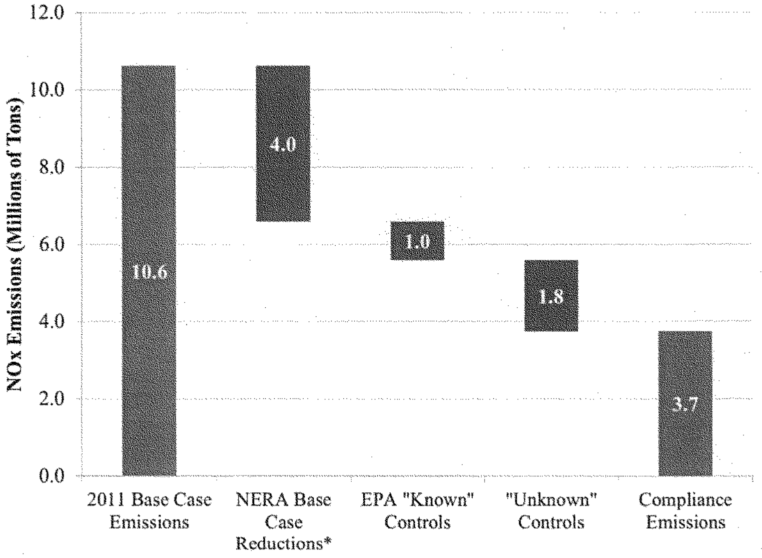
[6] Nonattainment areas are given different classifications—marginal, moderate, serious, severe or extreme—depending on how far out of attainment they are with the NAAQS at the time that designations must be made, two years after promulgation.

Figure S-2: NO_X Emissions and Categories of NO_X Reductions to Attain 65 ppb NAAQS (for 34 Non-Attaining States Only)



Note: Emissions and reductions include only states requiring emission reductions for compliance with a new ozone NAAQS of 65 ppb in this analysis.
*The NERA Base Case reflects 2022 conditions in each state requiring reductions, with two exceptions: The Base Case for UT and CA reflect conditions in 2031 and 2036, respectively, based on higher likely severity classifications in those two states.
Source: NERA calculations as explained in text

Figure S-3 shows the mix of emission reductions needed across 34 states that EPA projects will face compliance costs to achieve a 65 ppb ozone standard, including our estimates of the allocation of "unknown controls" to individual source categories. The dark green shows EPA's "known controls" and the light green shows NERA's evidence-based assumptions regarding where "unknown controls" will likely come from.[7] The remaining sum (shown in the blue bars) is 3.7 million tons—the aggregate limit for those 34 states to achieve attainment in all the states projected to be in nonattainment under baseline conditions. This 3.7 million ton aggregate limit needs to be met by the attainment deadlines, which we assume to be 2022 for all states except California and Utah, which are assumed to have much later attainment dates.[8]

As noted above, NERA's estimates of what the "unknown" controls will comprise includes deep cuts in the EGU sector, where emissions are concentrated in a few sources and costs per ton are thus lower than for the many smaller sources among the non-point source categories (*i.e.*, area, onroad mobile and nonroad mobile). NERA estimates that the remaining "unknown" controls outside of the EGU sector will involve much smaller incremental percentage reductions than from EGUs, because these will require programs such as scrapping a portion of vehicles and other small sources. These controls are also projected to come at a substantially higher cost per ton than the EGU controls—even though we assume that the small-source scrapping programs will only target the oldest, highest-emitting of each type of NO_X-emitting equipment.[9]

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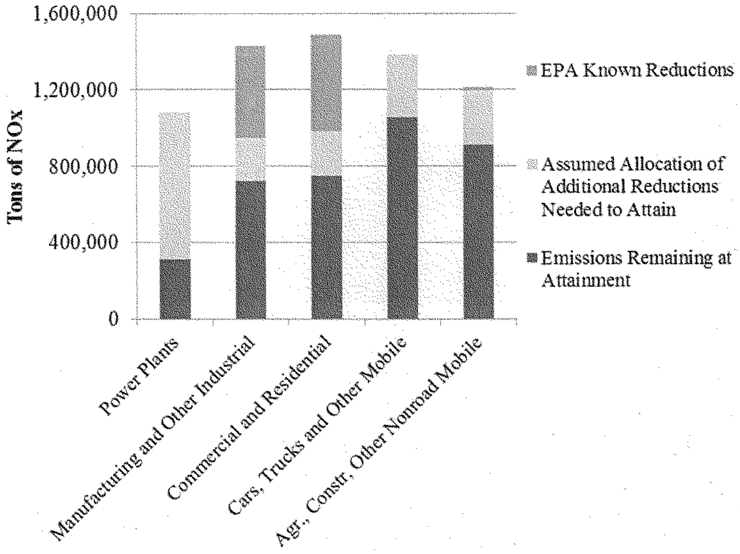
[7] This figure does not show the amount of EGU controls (mostly from installation of SCRs) that EPA has identified as "known" control in that sector because our analysis shows that one of the most cost-effective forms of control that EPA has called "unknown" will be to close those EGUs instead. Thus, we assume that the SCRs in EPA's list of "known" controls will not actually be installed, and replace their reductions with the much larger reductions that would come from EGU closures that are cost-effective for meeting a 65 ppb NAAQS (which appear as the light green area on the EGU bar).

[8] States that will be classified as marginal nonattainment in 2017 will face a 2020 attainment date, or will be re-designated as moderate, and then must be in attainment by 2023. Our analysis suggests that some of the marginal states may reach attainment by 2020 without incremental controls other than the baseline reductions, and they face no compliance cost in our analysis. We have assumed that marginal states that would not attain by 2020 under their baseline forecast will not undertake early costly action to avoid reclassification as moderate, and will attain by the moderate attainment date along with states that will have been classified as moderate in 2017.

[9] For example, our estimates of costs and tons removed by scrappage of light-duty cars is limited to vehicles still on the road in 2022 that are of a pre-2008 model year (*i.e.*, pre-Tier 2 vehicles). We estimate that those older vintages of cars will account for about 40% of projected light-duty vehicle emissions in 2022.

Figure S-3: NERA Analysis's Allocation of Additional Reductions Necessary to Attain a 65 ppb NAAQS to Categories of Emissions Sources in the 34 Non-Attaining States



Source: NERA calculations as explained in text

Compliance Costs to Achieve a 65 ppb Ozone Standard

We estimate that the potential costs of achieving a 65 ppb ozone standard could have a present value of almost \$1.1 trillion as of 2014 (based upon costs incurred from 2017 through 2040), not including any costs for forcing a massive cutback in generation from coal-fired EGUs to reduce NO_X emissions from the power sector (whose costs are endogenously determined in the economic impact model).[10] These costs are reported in Figure S-4. As a rough point of comparison, we estimate that EPA's annualized cost estimate implies a present value of about $167 billion.[11] The primary difference in our methodologies is the extrapolation method used to estimate the cost of "unknown" controls; we attempted to assess the kinds of controls that would be required after "known" controls and based our method on the estimated costs per ton of one such control (vehicle scrappage), whereas EPA relied on an arbitrary constant value.

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[10] Although the precise costs of the EGU closures is determined in the model, we used preliminary model runs to identify which closures would be as or more cost-effective than other unknown controls in our analysis. Based on this exercise, we estimate that the majority of the NO_X emission reductions associated with the EGU closures cost an average of about \$16,000 per ton, and range well above \$30,000 per ton in some states. The result of the constraints that we applied was 34 GW of outright unit retirements, but a substantial number of additional GW of coal-fired capacity is left on-line but no longer generates in the model. This means that more than 34 GW is effectively closed down in our analysis.

Figure S-4: Potential U.S. Compliance Spending Costs for 65 ppb Ozone Standard

	Present Value (Billions of 2014$)			Cumulative
	Capital	O&M	Total	Coal Retirements
Compliance Costs	$430	$630	$1,050	34 GW

Notes: Total is not equal to the sum of capital and O&M due to independent rounding. Present value is from 2017 through 2040, discounted to 2014 at a 5% real discount rate.
Cumulative coal retirements are incremental to baseline. These retirements are primarily due to assumed emission control measures but may also include indirect electric sector impacts of the ozone standards. This number is understated because it reflects only those plants that the model literally closes, while substantial additional GW of coal unit capacity is not reported by the model as "retired" but nevertheless is forced into a position of near-zero utilization.

Source: NERA calculations as explained in text

Allocating the estimated capital costs to spending in years prior to each state's projected compliance deadline, and allocating O&M costs to years after the respective compliance deadlines, Figure S-5 shows the pattern of annual compliance spending across all states (except for the endogenously-determined costs of coal unit retirements.)

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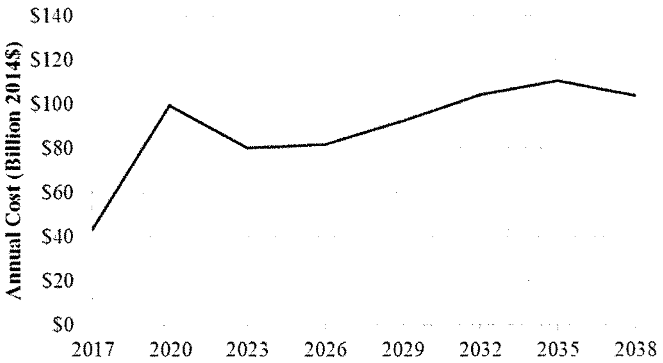
[11] This estimate assumes that EPA's total annualized cost estimate of $17 billion (including California) is incurred over a period of 20 years; that these 20 years begin in 2020, except in California where they begin in 2030; that these annual costs are converted to a present value in 2014 using a real annual discount rate of 5%; and that the present value is converted from 2011 dollars to 2014 dollars. Note that there are many differences in the EPA and NERA calculations so this estimate can only be viewed as providing a rough comparison.

Figure S-5: Potential Annual U.S. Compliance Spending Costs for 65 ppb Ozone Standard



Notes: Figure does not include compliance costs associated control measures in the electric power sector (scrappage of coal-fired power plants), which are modeled in N_{ew}ERA.
Source: NERA calculations as explained in text

Potential Impacts on the U.S. Economy and U.S. Households

The potential costs we estimated for a 65 ppb ozone standard are projected to have substantial impacts on the U.S. economy and U.S. households. Figure S-6 shows the potential macroeconomic effects as measured by GDP and U.S. household consumption. The 65 ppb ozone standard is projected to reduce GDP from the baseline levels by about $1.7 trillion on a present value basis from 2017 to 2040 (as of 2014, and in 2014 dollars) and by $140 billion per year on a levelized average basis over that period (*i.e.*, when spread evenly over years but retaining the same present value). Average annual household consumption over those same years could be reduced by an average of about $830 per household per year.

Figure S-6: Potential Impacts of 65 ppb Ozone Standard on U.S. Gross Domestic Product and Household Consumption

	Annualized	Present Value
GDP Loss (Billions of 2014$)	$140/year	$1,720
Consumption Loss per Household (2014$)	$830/year	N/A

Notes: Present value is from 2017 through 2040, discounted at a 5% real discount rate. Consumption per household is an annualized (or levelized) value calculated using a 5% real discount rate.
Source: NERA calculations as explained in text

Figure S-7 focuses on several dimensions of projected impacts on income from labor ("worker income") as a result of the 65 ppb ozone standard. Relative to baseline levels, real wages decline by about 0.6% on average over the period and labor income declines by about 0.9% on average, resulting in job-equivalent losses that average about 1.4 million job-equivalents. (Job-equivalents are defined as the change in labor income divided by the annual baseline income for the average job (see Figure S-7)). A loss of one job-equivalent does not necessarily mean one less employed person—it may be manifested as a combination of fewer people working and less income per worker. However, this measure allows us to express employment-related impacts in terms of an equivalent number of employees earning the average prevailing wage.[12] These are the *net* effects on labor and include the positive benefits of increased labor demand in sectors providing pollution control equipment and technologies.

Figure S-7: Potential Impacts of 65 ppb Ozone Standard on Labor

	Avg.
Baseline Annual Job-Equivalents (millions)	156
65 ppb Case:	
Real Wage Rate (% Change from Baseline)	-0.6%
Change in Labor Income (% Change from Baseline)	-0.9%
Job-Equivalents (Change from Baseline, millions)	-1.4

Notes: Average (Avg.) is the simple average over 2017-2040. "Job-equivalents" is defined as total labor income change divided by the average annual income per job. This measure does not represent a projection of numbers of workers that may need to change jobs and/or be unemployed, as some or all of the loss could be spread across workers who remain employed

Source: NERA calculations as explained in text

Potential Effects on U.S. Energy Prices

Emissions reduction costs of a 65 ppb ozone standard also is likely to have impacts on U.S. energy sectors, largely because the more stringent ozone standard is projected to lead to the premature retirement of many additional coal-fired power plants. Figure S-8 shows average energy price projections under the baseline and the 65 ppb ozone standard. The average delivered residential electricity price is projected to increase by an average of 1.7% over the period from 2017 through 2040 relative to what they could otherwise be in each year (which is projected to be rising even without a tighter ozone NAAQS). Henry Hub natural gas prices are projected to increase by an average of 3.7% in the same time period (again, relative to what they could otherwise be in each future year), while delivered residential natural gas prices could increase by an average of 3.7%. Part of the increase in delivered natural gas prices reflects the increase in pipeline costs due to control costs for reductions in NO_X emissions in the pipeline system that could be recovered through tariff rates.

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[12] The N_{ew}ERA model, like many other similar economic models, does not develop projections of unemployment rates or layoffs associated with reductions in labor income. Modeling such largely transitional phenomena requires a different type of modeling methodology; our methodology considers only the long-run, equilibrium impact levels.

Figure S-8: Potential Impacts of a 65 ppb Ozone Standard on Energy Prices Relative to Their Projected Levels in Each Future Year

		Avg. Baseline	Avg. 65 ppb Case	Change	% Change
Henry Hub Natural Gas	$/MMBtu	$6.22	$6.47	$0.25	3.7%
Natural Gas Delivered (Residential)	$/MMBtu	$14.23	$14.76	$0.53	3.7%
Natural Gas Delivered (Industrial)	$/MMBtu	$8.71	$9.27	$0.55	6.3%
Gasoline	$/gallon	$3.68	$3.69	$0.01	0.3%
Electricity (Residential)	¢/kWh	14.9¢	15.2¢	0.2¢	1.7%
Electricity (Industrial)	¢/kWh	9.7¢	10.0¢	0.3¢	2.8%

Notes: Average is the simple average over 2017-2040. The Baseline reflects expected growth in prices over the analysis period as predicted by the *Annual Energy Outlook 2014*. Figures in 2014$.

Source: NERA calculations as explained in text

Potential Effects on U.S. Sectors and Regions

All sectors of the economy would be affected by a 65 ppb ozone standard, both directly through increased emissions control costs and indirectly through impacts on affected entities' customers and/or suppliers. There are noticeable differences across sectors, however. Figure S-9 and Figure S-10 show the estimated changes in output for the non-energy and energy sectors of the economy, respectively, due to the emissions reduction costs of a 65 ppb ozone standard.

Figure S-9: Potential Impacts of 65 ppb Ozone Standard on Output of Non-Energy Sectors (Percentage Changes from Baseline)

	Agriculture	Commercial/ Services	Manufacturing	Commercial Transportation	Commercial Trucking
Average (2017-2040)	-0.9%	-0.4%	-0.3%	-0.9%	-0.5%

Note: Values are the simple average of percentage change over 2017-2040.
Source: NERA calculations as explained in text

Figure S-10: Potential Impacts of a 65 ppb Ozone Standard on Output of Energy Sectors (Percentage Changes from Baseline)

	Coal	Natural Gas	Crude Oil/Refining	Electricity
Average (2017-2040)	-28%	3.9%	-0.8%	-1.5%

Note: Values are the simple average of percentage change over 2017-2040.
Source: NERA calculations as explained in text

Figure S-11 shows the estimated average annual change in consumption per household for individual N$_{ew}$ERA regions. A region's attainment costs and its sectoral output mix determine to a large extent whether a region fares better or worse than the U.S. average, but all regions could experience lower household consumption.

Figure S-11: Potential Impacts of a 65 ppb Ozone Standard on Annual Consumption per Household by Region

Region	2014$
Arizona and Mountain States	-$690
California	-$790
Florida	-$250
Mid-America	-$770
Mid-Atlantic	-$1,370
Mississippi Valley	-$640
New York/New England	-$1,530
Pacific Northwest	-$310
Southeast	-$620
Texas, Oklahoma, Louisiana	-$1,290
Upper Midwest	-$490
U.S.	**-$830**

Notes: Values are the levelized average over 2017-2040, annualized using a 5% real discount rate.
Maps of N_{ew}ERA regions are provided in the report body and Appendix A.

Source: NERA calculations as explained in text

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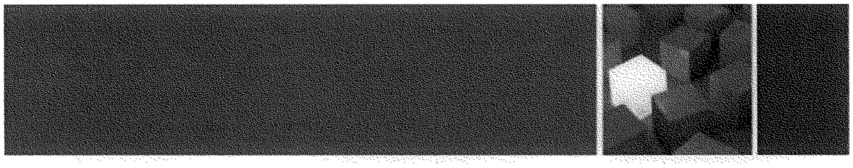

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Statement of The

National Association of REALTORS®

Submitted for the Record to

The United States House Of Representatives Oversight And Government Reform Committee

Interior Subcommittee

Hearing Titled

Examining the Impacts of EPA Air and Water Regulations On the States and the American People

February 26, 2015

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EQUAL HOUSING OPPORTUNITY

INTRODUCTION

On April 21, 2014, the Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) proposed to reduce the amount of scientific analysis needed in order to declare a "water of the U.S." including wetlands on private property across the country. On behalf of 1-million members involved in all aspects of commercial and residential real estate, the National Association of REALTORS® (NAR) thanks you for holding this oversight hearing and for the opportunity to submit these written comments for the record.

Currently before declaring a water of the U.S., the agencies must first conduct a "significant nexus" analysis for each stream or wetland to determine that regulation could prevent significant pollution from reaching an ocean, lake or river that is "navigable," the focus of the Clean Water Act. Because, in the agency's view, a full-blown scientific analysis for each water or wetland is "so time consuming and costly," the agencies are proposing instead to satisfy this requirement with a more generic and less resource intensive "synthesis" of academic research showing "connectivity" between streams, wetlands and downstream water bodies. On this basis, the agencies believe that they can waive the full analysis before regulating most of streams and wetlands, and reduce the analysis for any "other water" that has more than a "speculative or insubstantial" impact. We disagree.

NAR opposes this vague and misguided "waters of the U.S." proposed regulation. While perhaps an administrative inconvenience, site-specific data and analysis forces the agencies to justify their decision to issue wetland determinations on private property and focus on significant impacts to navigable water. By removing the analytical requirement for regulation, the agencies will make it easier not only to issue more determinations but also force these property owners to go through a lengthy federal negotiation and broken permit process to make certain improvements to their land.

At the same time, the proposal does not 1) delineate which improvements require a federal permit, 2) offer any reforms or improvements to bring clarity or consistency to these permit requirements, or 3) define any kind of a process for property owners to appeal U.S. water determinations based on "insubstantial" or "speculative" impacts. The resulting lack of certainty and consistency for permits, or how to appeal "wetland determinations," will likely complicate real estate transactions such that buyers will walk away from the closing table or demand price reductions to compensate for the hassle and possible transaction costs associated with these permits. We urge Congress to stop these agencies from moving forward with this proposal until they provide a sound scientific basis for the regulatory changes and also streamline the permitting process to bring certainty to home- and small-business owners where wetlands are declared.

PROPOSED RULE ELIMINATES THE SOUND SCIENCE BASIS FOR U.S. WATER DETERMINATIONS

Today, the EPA and Army Corps may not regulate most "waters of the U.S.," including wetlands, without first showing a significant nexus to an ocean, lake or river that is navigable, the focus of the Clean Water Act. "Significant nexus" is a policy and legal determination based on a scientific site-specific investigation, data collection and analysis of factors including soil, plants, and hydrology.

The agencies point to this significant nexus analysis as the reason they are not able to enforce the Clean Water Act in more places like Arizona and Georgia.[1] On its website, EPA supplies these "representative cases" where it's currently "so time consuming and costly to prove the Clean Water Act protects these rivers." EPA also documents the "enforcement savings" from the proposal in its economic analysis.[2] None of these major-polluter examples involve home or small business owners, which typically do not own significant acreage (the typical lot size is a ¼ acre)[3], let alone disturb that amount of wetland with a typical home project.

Under this proposal, the agencies would waive the site-specific, data-based analysis before regulating land use on or near most streams and wetlands in the United States (see table 1). The proposal:

- Creates two new categories of water – i.e., "all tributaries" and "adjacent waters."
- Adds most streams, ponds, lakes, and wetlands to these categories. "Tributary" is anything with a bed, bank and "ordinary high water mark," including some "ditches." "Adjacent" means within the "floodplain" of the tributary, but the details of what constitutes a floodplain, like how large an area (e.g., the 5-year or 500 year floodplain), are left to the unspecified "best professional judgment" and discretion of agency permit writers.
- Moves both categories from column B (analysis required for regulation) to column A (regulated without site specific data and analysis).

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[1] http://www2.epa.gov/uswaters --for links to the examples, click "Enforcement of the law has been challenging."
[2] http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf
[3] American Housing Survey, 2009.

Table 1. Proposed changes to "Waters of the U.S." regulatory definition

Column A **(Regulated without analysis)**	**Column B** **(Analysis required for regulation)**
Navigable or Interstate • The Ocean • Most Lakes • Most Rivers	
Non-Navigable and Intrastate • **All** ~~Some~~ Tributaries (Streams, Lakes, Ponds) ○ Perennial ○ Seasonal ○ **Ephemeral** • **Most** ~~Some~~ Wetlands ○ Adjacent to navigable water ○ **Adjacent to** ~~Directly Abutting~~ covered stream	Non-Navigable and Intrastate ~~• Rest of the Tributaries~~ ~~○ Ephemeral~~ • Rest of Wetlands ~~○ Adjacent to tributary~~ ○ Not adjacent • Any other water ~~○ Adjacent to navigable water~~ ~~○ Adjacent to tributaries~~ ○ Not-adjacent

For any remaining or "other water," the agencies would continue regulating case-by-case using a significant nexus analysis. However, the amount of analysis is dramatically reduced. Under this proposal, all agency staff would have to show is more than a "speculative or insubstantial" impact to navigable water. If, for instance, there were many wetlands within the watershed of a major river, no further analysis would be required to categorically regulate land use within any particular wetland with that river's watershed. Also, the data and analysis from already regulated water bodies could be used to justify jurisdiction over any other "similarly situated" water without first having to visit the site and collect some scientific data.

Contrary to agency assertions, this proposal does not narrow the current definition of "waters of U.S."

- While technically not adding "playa lakes," "prairie potholes," or "mudflats" to the definition, the proposal does remove the analytical barrier which, according to EPA, is preventing both agencies from issuing U.S. waters determinations on private property in more places including Arizona and Georgia.
- Codifying longstanding exemptions (prior converted crop land and waste treatment) does not reduce the current scope of definition; it simply writes into regulation what the agencies have already been excluding for many years.
- Giving up jurisdiction over "ornamental" (bird baths), "reflecting or swimming pools" is not a meaningful gesture, as it's doubtful that any court would have let them regulate these, anyway.
- It is not clear that many ditches would meet ALL of the following conditions – i.e., wholly excavated in uplands AND drains only uplands AND flows less than year-round -- or never ever connects to any navigable water or a tributary in order to qualify for the variance. Also, the term "uplands" is not defined in the proposal so what's "in or out" is likely to be litigated in court, which does not provide certainty to the regulated community.

LITERATURE REVIEW AND SYNTHESIS DOES NOT SUPPORT THE PROPOSED RULE

In lieu of site-specific, data-based analysis, the EPA and the Corps are proposing to satisfy the significant nexus requirement with a less resource intensive "synthesis" of academic studies. The agencies believe these studies show "connectivity" between wetlands, streams and downstream water bodies, and that's sufficient in their view to justify and waive the full analysis for land-use regulations on or within the floodplain of one of these waters.

However, this synthesis is nothing more than a glorified literature review.[4] EPA merely compiles, summarizes and categorizes other studies, and labels them a "synthesis." EPA conducts no new or original science to support or link these studies to its regulatory decisions. Three quarters of the citations included were published before the Supreme Court's decision in Rapanos v. U.S. (2006), and the rest appear to be more of the same. It breaks no new ground. The Supreme Court did not find this body of research to be a compelling basis for prior regulatory decisions, either in Rapanos or SWANCC v. the Army Corp (2001). Putting a new spin on old science does not amount to new science.

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[4] For EPA's synthesis: http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=238345

In addition, scientists with GEI Consultants[5] reviewed the literature synthesis and concluded that these studies do not even attempt to measure, let alone support a significant nexus finding. According to GEI,

> "Most of the science on connectivity … has been focused on measuring the flow of resources (matter and energy) from upstream to downstream. …[T]hese studies have not focused on *quantifying the ecological significance* of the input of specific tributaries or headwaters, alone or in the aggregate, and ultimately whether such effects could be linked directly and causally to impairment of downstream waters." [6]

Knowing how many rocks downstream came from upstream won't tell you what the Supreme Court determined needs to be known, which is how many times rocks can be added before downstream water becomes "impaired" under the Clean Water Act. Asking the Science Advisory Board if the synthesis supports the first conclusion (i.e., some rocks come from upstream) doesn't answer the second (how many times can rocks be added downstream before significantly impacting the water's integrity?). EPA is asking entirely the wrong set of policy questions. As GEI puts it,

> "The Science Advisory Board (SAB) charge questions were of such limited scope that they will do little to direct the Synthesis Report toward a more useful exploration of the science needed to inform policy … The questions will not provide the SAB panel with needed directive to require substantive revisions to the report such that it … inform(s) policy with regard to Clean Water Act jurisdiction."[7]

THERE IS NO SUBSTITUTE FOR SITE-SPECIFIC DATA & ANALYSIS TO DETERMINE U.S. WATERS

Here's how EPA's synthesis of generic studies stacks up against a more targeted study specific to and based on data for each stream or wetland.

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[5] For GEI's credentials, see: http://www.geiconsultants.com/about-gei-1

[6] For NAR's summary and link to GEI's comments: http://www.realtor.org/articles/nar-submits-comments-on-draft-water-report

[7] For NAR's summary and link to GEI's comments: http://www.realtor.org/articles/nar-submits-comments-on-draft-water-report

Table 2. EPA synthesis of research versus significant nexus analysis

Significant Nexus	Synthesis of Research
Proves that regulation of a stream or wetland will prevent pollution to an ocean, lake or river	Shows *presence* of a connection between streams, wetlands, and downstream, and not *significance*
Shows how much matter/energy can be added to a tributary or wetland before the Act applies	Shows how much of the matter/energy moved from upstream to downstream
Based on site specific data and analysis of soil, plants, hydrology, and other relevant factors	Dependent upon whatever data and analysis academics have used for their connectivity study
Requires an original scientific investigation, data and analysis for each water body to be regulated	Includes no new or original science by agencies; it's a literature review
Relies on timely and water-body-specific facts, data and analysis	Relies on substantially the same body of research which the Supreme Court didn't find compelling

The EPA may not want to "walk the nexus" and collect data on soil, plants and hydrology, but it's forced the Agency to justify their regulatory decisions, according to the staffs' own interviews with the Inspector General:[8]

- "Rapanos has raised the bar on establishing jurisdiction."
- "...lost one case ... because no one walked the property..."
- "...have to assemble a considerable amount of data to prove significant nexus."
- "...many streams have no U.S. Geological Survey gauging data."
- "...need several years of biotic observations...."
- "...there is currently no standard stream flow assessment methodology."

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[8] Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation, Report No. 09-N-0149 (April 30, 2009). For a link: http://www.epa.gov/oig/reports/reportsByTopic/Enforcement_Reports.html

- "…biggest impact is out in the arid West, where it is comparably difficult to prove significant nexus."

As a result, many U.S. water determinations (which would not previously have been questioned) are now being reviewed and are not holding up to either EPA or Justice Department scrutiny. Again, from the EPA interviews:

- "Of the 654 jurisdictional determinations [in EPA region 5] … 449 were found to be non-jurisdictional."
- "An estimated total of 489 enforcement cases … [were] not pursued … case priority was lowered … or lack of jurisdiction was asserted as an affirmative defense…"
- "In the past, everyone *just assumed* that these areas are jurisdictional" (emphasis added).

"Walking the nexus" may be an administrative inconvenience, but the data don't support an approach based on 'just assuming.' The main reason for the site-specific, data-based analysis is that it provides a sound scientific basis for agency regulatory decisions. Analysis also raises the cost of unjustified U.S. water determinations. It forces the agencies to do what Congress intended, which is to focus on waters which are either a) in fact navigable or b) significantly impact navigable water. It also prevents agencies from regulating small businesses or homeowners that are not major contributors to navigable water quality impairment.

PROPOSED RULE WILL OVERCOMPLICATE ALREADY COMPLEX REAL ESTATE TRANSACTIONS

Small-business and homeowners are not the problem. Few own enough property to be able to disturb a 1/2-acre of wetland, which is how the Nationwide 404 Permit Program defines *de minimis* impact to the environment. The typical lot size is a ¼ acre with three-quarters having less than an acre.[9] None of the big polluter examples EPA presents involves a homeowner or small business. Yet, by removing the analytical barrier to regulation, agencies will be able to issue more U.S. water determinations on private properties in more places like Arizona, Georgia or wherever else it's now "too time consuming and costly to prove the Clean Water Act protect these rivers," according to the EPA.[10]

The home buying process[11] will not work unless there is sufficient property information to make informed decisions. This is why buyers are provided with good faith estimates and disclosures about material defects and environmental hazards. It is why they are entitled to request a home inspection by a professional before making decisions. It is also why there's such a thing as owner's title insurance. Contracts and legal documents have to be signed to ensure that buyers receive full information and understand it. Later, you can sue if the property isn't as advertised or there are misrepresentations.

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[9] American Housing Survey, 2009.

[10] http://www2.epa.gov/uswaters -- for the examples, click on "Enforcement of the law has been challenging"

[11] In previous comments, the International Council of Shopping Centers, National Association of Homebuilders, NAR and others have thoroughly documented the commercial and homebuilding impacts of the U.S. waters proposed rule. In this statement, NAR focuses on the impact to existing homeowners which have not been documented.

The "waters of the U.S." proposal introduces yet another variable – letters declaring wetlands on private property – into an already complicated home buying process. By removing the analytical requirement before issuing one of these letters, the agencies will make it easier to issue more of them and in more places. The problem is each letter requires the property owner to get a federal permit in order to make certain improvements to their land. But they don't know which improvements require a permit. Those aren't delineated anywhere in the proposal. If on the other hand, they take their chances and don't initiate a potentially lengthy federal negotiation as part of a broken permit process, they could face civil fines amounting to tens of thousands of dollars each day and possibly even criminal penalties.

Also, what's required can vary widely across permits – even within the same district of the Corps. No one will inform you where the goal posts are; just that it's up to you and they'll let you know when you get there. Often, applicants will go through this year-long negotiation only to submit the permit application, find that staff has turned over and they have to start over with a new staffer who has completely different ideas about how to rewrite the permit.

While more U.S. waters letters could be issued under this proposal, the agencies do not provide the detailed information needed for citizens to make informed decisions about these letters. The letter could state for instance: "the parcel is a matrix of streams, wetlands, and uplands" and "when you plan to develop the lot, a more comprehensive delineation would be recommended." Real estate agents will work with sellers to disclose this information, but buyers won't know which portion of the lot can be developed, what types of developments are regulated, or how to obtain the permit. They may consult an attorney about this but will most likely be advised to hire an engineer to "delineate" the wetlands without being told what that means. And even if this step is taken, there is no assurance that this analysis will be accepted by the agency or that a permit will ever be issued.

The potential for land-use restrictions and the need for costly permits will increase the cost of home ownership and make regulated properties less attractive to buyers. Of two homes, all else equal (lot size, number of rooms, etc.), the one with fewer restrictions should have higher property value.[12]

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[12] There is strong empirical data to support this proposition, although economists may disagree. For instance:

- E.L. Glaeser, and B.A. Ward, The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston. Journal of Urban Economics 65 (2009) 265-278.

However, before buying, the buyer will want to know in exactly which ways the property could be restricted as well as how much those restrictions could cost (time, effort, money). They will need this information when weighing whether to come to the closing table and deciding how much to ask in reducing listing price in order to compensate for the hassle of a potential federal negotiation for each unspecified improvement on the property they're considering purchasing.

To illustrate the point, after Congress revised the flood insurance law, many buyers refused to consider floodplain properties not due to the actual insurance cost but because they read in a newspaper about $30,000 flood insurance premiums. Others negotiated reduced sales prices because they feared the property was "grandfathered", and they could potentially see their rates skyrocket, even when, in fact, the home was not grandfathered and the provision of concern had not taken effect and would not for several years. While it may be entirely true that the proposed rule will not cover all homes in a floodplain (only those where a U.S. water is filled) nor regulate such normal home projects as mowing grass and planting flower beds, the takeaway from the flood insurance experience is that buyers make decisions based on fear and uncertainty, both real and ***imagined.***

In the case of wetlands, buyers have legitimate reason for concern. Many will have heard the horror story of the Sacketts in Priest Lake, Idaho, who were denied their day in court when they questioned a wetlands determination.[13] Others just south of here in Hampton Roads, Virginia, will read the cautionary tales of buyers suing sellers over lack of wetlands disclosures[14] or neighbor-on-neighbor water wars for mowing grass or planting seedlings.[15] Some might even have a neighbor to two who've been sued over the years for tree removals or grading (e.g., Catchpole v Wagner[16]). This all reinforces the need for the EPA and the Corps to provide more information rather than less about the rule, what it does and does not do, and provide as much detail as possible all upfront.

So far the agencies have responded by breaking up the rulemaking process into two parts, and putting forward only the first. This proposal, which clarifies "waters of the U.S.," determines "who is regulated." The issue here is whether site-specific data and analysis is required before a wetlands letter is issued. "What is regulated" is not a part of this proposal. Nor does the proposal lay out the full range of home projects that trigger a permit. The wetland permitting process itself is an entirely separate rulemaking. The issue there is what exactly I must do when I get one of these letters and how to appeal it.

- K.R. Ihlanfeldt, The Effect of Land Use Regulation on Housing and Land Prices. Journal of Urban Economics 61 (2007) 420-435.

[13] For the chilling facts of case, see: http://www.pacificlegal.org/Sackett

[14] http://hamptonroads.com/2010/05/cautionary-tale-wetlands-violations-will-cost-you

[15] http://hamptonroads.com/2012/05/newport-news-gets-swamped-wetlands-dispute

[16] 210 US Dist LEXIS 53729, at *1 (W.D. Wash. 2010)

Based on a report by the Environmental Law Institute (ELI),[17] that permitting process is broken and needs reform and streamlining to provide some consistency, timeliness, and predictability. But any comments or suggestions about this have been deemed non-germane and will not be considered by the agencies in the context of a "waters of the US" proposal. Because the agencies have decided to play a regulatory shell game with the "who" vs. the "what," property owners have been put in an untenable position of commenting on a regulation without knowing its full impact. Those who own a small business will be denied the opportunity under another law to offer significant alternatives that could clarify or minimize the proposed "waters of U.S." impact while still achieving the Clean Water Act's objectives.[18]

These are some property buyer questions which are not answered by the immediate proposed rule:

- What is the full range of projects that will require a federal permit?
- What can I do on my property without first having to get a permit?
- What do I have to do to get one of these permits?
- What's involved in the federal application process?
- What information do I have to provide and when?
- How long will the permit application take?
- How will my project and application be evaluated?
- What are the yardsticks for avoiding or minimizing wetlands loss?
- What are the full set of permit requirements and conditions?
- Are there changes I can make in advance to my project and increase my chances of approval?
- Can I be forced to redesign my home project?
- What kinds of redesigns could be considered?
- What if I disagree with the agency's decision, can I appeal?
- What exactly is involved in that appeal?
- What do I have to prove in order to win?
- Will I need an attorney? An engineer? Who do I consult?
- And how much will all this cost me (time, efforts, money)?

The "Waters of the U.S." proposal creates these uncertainties into the property buying process.

Uncertainty #1: The "waters of the U.S." proposal does not tell me what I can and cannot do on my own property without a federal permit.

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[17] http://www.eli.org/research-report/wetland-avoidance-and-minimization-action-perspectives-experience

[18] For EPA's justification against conducting a small business review panel under the Regulatory Flexibility Act, see: 79 Fed. Reg. 22220 (April 21, 2014).

Not all property owners in the floodplain will be regulated, only those who conduct regulated activities. Again, that information is not found in the "waters of U.S." proposal, and there is not much more in the decision documents from the previous regulation for the "nationwide" (general) permit program (2012). The general permit for commercial real estate (#39) is separate from residential (#29), but both include a similarly vague and uber-general statement about what's regulated:

> "Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision. This NWP authorizes the construction of building foundations and building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development)."[19]

However, construction projects are not the only ones that may require a permit. For example, home owners have been sued for not obtaining one to perform these activities:

- Landscaping a backyard (Remington v. Matheson [neighbor on neighbor])
- Use of an "outdated" septic system (Grine v. Coombs)
- Grooming a private beach (U.S. v. Marion L. Kincaid Trust)
- Building a dam in a creek (U.S. v. Brink)
- Cleaning up debris and tires (U.S. v. Fabian)
- Building a fruit stand (U.S. v. Donovan)[20]
- Stabilizing a river bank (U.S. v. Lambert)
- Removing small saplings and grading the deeded access easement (Catchpole v. Wagner)[21]

Also, the proposal includes exemptions for specific activities performed by farmers and ranchers, but not homeowners or small businesses. The agencies would not have exempted these activities from permits unless they believed these activities could trigger them. Yet, none of these "normal farming" practices appear to be uniquely agricultural, opening up the non-farmers to regulation. Here are a couple of the listed exemptions but the full set can be found on EPA's website.[22]

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[19] http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP_29_2012.pdf

[20] Note: The defendant lost because he couldn't finance an expert witness to refute the Corps' wetlands determination; under this proposed rule, the Corps would no longer have to provide any data and analysis at all to support its future determinations; the burden would be entirely on the property owner to come up with that data and analysis on their own.

[21] There is an extended history between Catchpole and Wagner over activity on this easement, and the Corps has been repeatedly drawn into the dispute. In one instance the Sheriff was called, and the Corps had to step in and referee that "normal mowing activity" was not a violation that the Corps would pursue under the Clean Water Act. NAR would expect more of these kinds of disputes to arise, should the proposed rule be finalized.

- Fencing (USDA practice #383)
- Brush removal (#314)
- Weed removal (#315)
- Stream crossing (#578)
- Mulching (#484)
- Tree/Shrub Planting (#422)
- Tree Pruning (#666)

While the proposal could open up more properties to wetlands letters, permits and lawsuits, it does not in any way limit who can sue over which kinds of activities for lack of permits. It does, on the other hand, reduce the amount of data and analysis the Corps or EPA need in order to declare U.S. waters on these properties, and shifts the entire burden to the property owner to prove one these waters do not exist on their property before they can win or get a frivolous case dismissed.

Uncertainty #2: The proposal doesn't tell me how to get a permit, what's required and how long it will take.

Again, the permitting process is not a part of the 'waters of the U.S.' proposal, denying home owners and small businesses an opportunity to comment on the proposed rule's full impact or offer reasonable alternatives that could minimize the impact while protecting navigable and significant nexus waters. EPA's economic analysis on page 16 does provide an estimate of the average cost for a general permit ($13,000 each).

Costs go up from there. The estimate of $13,000 is only for a general permit and for the application alone; it doesn't include re-designing a project to obtain permit approval or the conditions and requirements which can vary widely across permits. While not providing an estimate of the time it takes to get one of these permit, U.C. Berkeley Professor David Sunding found based on a survey that the "[general] permits in our sample took an average of 313 days to obtain."[23] Individual permits can take even longer and be significantly more expensive.

The reason that general permits have the lowest price tag is because they are intended to reduce the amount of paper work and time to start minor home construction projects that "result in minimal adverse environmental effects, individually or cumulatively." One of the conditions for the permit is a project may not disturb more than a ½ -acre of wetlands or 300 linear feet of streambed, the Corp's definition of *de minimis*. However, transaction costs and requirements may vary.

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[22] http://www2.epa.gov/sites/production/files/2014-03/documents/cwa_404_exempt.pdf

[23] http://areweb.berkeley.edu/~sunding/Economics%20of%20Environmental%20Regulation.pdf

The Environmental Law Institute studied the process, and found very little consistency, predictability or timeliness across permits.[24] The process begins with a letter from the agency declaring U.S. water on the property. Home owners may be given a copy of the law, told to submit any "plans to develop the lot", and be reminded that the burden of proof is entirely on them. No examples of how to comply are offered. There might be a check list (which is widely frowned upon) but there is no single definition or yard stick or practical guidance of any sort for the key compliance terms "avoidance," "minimization" and "practicable."

If you ask "which part of my property can I develop?", the answer is "hire an engineer and delineate it." "What if I make these changes to my project before applying?", the answer may be "I'll know it when we see it." There is no standard approach that the Corps follows to evaluate the project. According to the ELI's interviews, it is common for applicants to go through an entire negotiation and upon submitting an application, find staff turned over and the new individual has a completely different concept of what's most important to avoid and the best way to minimize.

The following are more actual quotes by regulators documented in the ELI report:

- "The question is, how much is enough? It's all judgment. It depends on the person's mood and is extremely variable."
- "We ask them to document plans and show how they get to where they are. If I think you can do more, I'm going to show you. The burden is on the applicant to show me where they've been in the journey."
- "I like to be a rule maker with regard to work I've done, but the more I standardize, the more I restrict myself with regard to find possible solutions."
- "[B]ecause judgments on which impacts are more avoidable or more important exists in a grey area, a lot of the decision making within the Corps depends on professional judgment, causing a lot of variability."
- "There are times when the agency will pressure the applicant to do more avoidance or minimization during the permitting process."
- "There are times when they won't sign off because they want a certain thing. That's the subjective aspect and I think that is the way it ought to work."

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[24] For ELI's report, http://www.eli.org/research-report/wetland-avoidance-and-minimization-action-perspectives-experience

Permit decisions appear completely subjective, iterative and not uniform across individual applicants. It seems that whatever the agency assumes is necessary to avoid or minimize wetlands loss, goes. If you refuse to provide a single piece of information or don't go along 100% with a proposed design modification, your permit is summarily denied. In at least one example (Schmidt v. the Corps), the agency denied the permit to build a single family home on a lot in part because the Corps identified other lots the land owner owned and his neighbors didn't seem to be objecting to construction on those lots (yet).

For these reasons, the ELI recommended several reforms to the wetlands permit process, including developing guidelines identifying common approaches and quantifiable standards. But at this time, the agencies don't appear interested in sensible recommendations like these, even if it brings some consistency, certainty or reduces the burden on small business or homeowners while still protecting the environment. "Nationwide permits do not assert jurisdiction over waters and wetlands .... Likewise, identifying navigable waters ... is a different process than the NWP authorization process," according to the Corps.[25]

Uncertainty #3: The proposal doesn't tell me what to do if I disagree with an agency decision, or how to prove the Clean Water Act does not apply to my property.

The proposal asserts jurisdiction over any U.S. water or wetland with more than a "speculative or insubstantial" impact on navigable water. Yet, nowhere does this proposal define those terms or a process for how a homeowner may appeal a U.S. water determination based on "insubstantial or speculative" impacts.

The proposal will eliminate the need for agencies to collect data and perform analysis to justify regulation for most water bodies. Before, it was up to the agencies to prove the Clean Water Act applies, but under this proposal, the burden would shift 100% to the property owners to prove the reverse. And the cost will be higher for property owners because (1) they don't have the expertise needed, (2) there is no guidance for delineating "insubstantial/speculative" impacts, and (3) they have not been learning-by-doing these analyses as the agencies have for decades.

Ironically, the rationale for the proposed rule is these agencies cannot justify the taxpayer expense of site specific data and analysis, yet the proposal is forcing individual taxpayers to hire an engineer and pay for the very same analysis themselves or else go through a broken permit process.

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[25] 77 Fed. Reg. 10190 (Feb. 21, 2012)

Administrative inconvenience is not a good excuse. If it's too hard for the federal government to do some site visits, data collection and analysis in order to justify their regulations, then perhaps it's simply not worth doing.

Conclusion

Based on the forgoing, NAR respectfully requests that Congress step in and stop these agencies from moving forward with a proposed rule that removes the scientific basis for "waters of U.S." regulatory decisions. It does not provide certainty to taxpayers who own the impacted properties and will complicate property and home sales upon which the economy depends.

Thank you for the opportunity to submit these comments. NAR looks forward to working with committee members and the rest of Congress to find workable solutions that protect navigable water quality while minimizing unnecessary cost and uncertainty for the Nation's property owners and buyers.

Written Testimony of Thomas W. Easterly, Commissioner
Indiana Department of Environmental Management (IDEM)
Before the U.S. House of Representatives
Committee on Oversight and Government Reform
February 26, 2015

Chairman Chaffetz and Ranking Member Cummings and members of the Committee, thank you for the opportunity to provide comments for the Committee's hearing regarding, the proposed national rulemaking *Definition of "Waters of the United States" Under the Clean Water Act* (79 Fed. Reg. 22188, April 21, 2014) (hereinafter, "Proposed Rule").

My name is Thomas Easterly and I serve as the Commissioner of the Indiana Department of Environmental Management (IDEM). IDEM is responsible for the daily implementation of the Clean Water Act (CWA) water quality programs in Indiana. I have served in this capacity since 2005. I stand firm along with Indiana's leadership in opposition to the Proposed Rule. The Proposed Rule demonstrates an unacceptable overreach in authority which is harmful to Indiana.

Governor Michael R. Pence and Lt. Governor and Secretary of Agriculture Sue J. Ellspermann submitted a letter against the Proposed Rule. I, on behalf of Indiana, signed onto a joint letter authored by Alabama which outlines many states' concerns with the Proposed Rule. Those letters are attached as Exhibits A and B.

Additionally, I, along with my colleague, Ted McKinney, Director of the Indiana State Department of Agriculture, submitted a comment letter to the U.S. EPA (EPA) and U. S. Army Corps of Engineers (the Corps) outlining Indiana's key concerns. That letter is attached as Exhibit C. I value the opportunity to reiterate some of the significant points of that letter here.

I agree that in the wake of *Rapanos v. United States* there was a need to clarify the applicability of the Clean Water Act to certain waters. However, the Proposed Rule falls far short of the clarity sought by its promulgation, and multiple procedural errors have raised legitimate concerns in the regulated community. These procedural and substantive shortcomings require the withdrawal of the Proposed Rule. EPA and the Corps must restart the process and work with States as co-regulators as well as all stakeholders, including regulated industry, to draft regulations that provide the clarity needed.

Key issues that need to recognized and/or addressed:

1. **The Proposed Rule seeks to regulate many waters already regulated by Indiana.**

The States know best how to protect the waters of their state. The U.S. Supreme Court has noted that:

> "Congress passed the CWA for the stated purpose of 'restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters.'...In so doing, Congress chose to 'recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution...."

Admittedly, *Rapanos* leaves open the jurisdictional limitations under the Clean Water Act. However, *Rapanos* also leaves open the opportunity to allow States to fulfill this responsibility. State regulators are more familiar with and accountable to their regulated industries than distant federal regulators. We do not need this additional layer of federal regulation in order to realize the goal of the Clean Water Act. Indiana can get there on its own. The Proposed Rule should be withdrawn so that Indiana can seek the right solutions for Indiana.

2. **The Proposed Rule's lack of clarity allows for misinterpretation and creates the opportunity for an unreasonable expansion to what is regulated.**

Indiana prefers rules over guidance for both clarity and enforceability. I find the inclusion of specific exceptions/exemptions/exclusions in addition to those permitting exemptions already existing in Section 404(f) of the Clean Water Act useful. If, during implementation, these exceptions are treated as iron clad and not second guessed, the added specificity will expedite the determination of the need for, and the issuance of, some 401 water quality certifications. However, we stress that the exemptions and other important aspects of final rule must be clarified.

a. The final rule must clarify the full scope of the exemption for a waste treatment system and other waste management systems.

I agree that "waste treatment systems, including treatment ponds and lagoons, designed to meet the requirements of the Clean Water Act" are not waters of the U.S. Yet, the proposed rule creates confusion over this provision by adding a comma after "lagoons" thereby implying that all waste treatment systems must be designed to meet Clean Water Act requirements. This is not true today as waste treatment systems that do not discharge to waters of the U.S. are not subject to Clean Water Act requirements.

Also, further definition of what is and is not included as a waste treatment system must be added and it must be clearly stated that permitted storm water collection systems (particularly MS4s) fall within the exclusion of "waste treatment systems."

b. The final rule must clarify the complete description of what portions of ditches are not jurisdictional.

Regarding the exclusion of "ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow," the Agencies should clarify in the final rule that such ditches that drain uplands, but do eventually discharge to waters of the

U.S. are not jurisdictional throughout the portion of the ditch that is upstream of the traditional Waters of the United States defined in proposed (a)(1) through (a)(5). Additionally, a definition of upland should be included in the final rule that clarifies that upland is all land other than wetlands even when rainfall results in ponding of water in flat areas. Further, manmade drainage ditches that drain uplands only should not be jurisdictional regardless of the number of months it holds water. Finally, a landowner should be able to use a ditch to drain a non-jurisdictional water, such as a private pond or prior converted cropland, without turning that water body into a water of the U.S.

c. The final rule must clarify the definition of "significant nexus."

I have concerns with the use of the term "significant nexus" in the Proposed Rule. First, the courts are split as to whether significant nexus is the proper test under *Rapanos*. Such a term should not be used to justify federal jurisdiction over broad categories of water such as ephemeral water, or to bring "other waters" under federal control. If the significant nexus test is to be used, however, it must be as clear as possible. The language needs to be simplified to accurately reflect Justice Kennedy's definition in *Rapanos*. In his description of significant nexus, Justice Kennedy identified waters that "affect, the chemical, physical, **and** biological integrity" which is critically different from saying "affect the chemical, physical, **or** biological integrity."

d. The final rule must clarify that connecting waters will themselves not be considered jurisdictional.

The proposed definition of "tributary" includes water that goes underground and the proposed definition of "neighboring" includes water that has a connection to navigable water only through shallow groundwater or through a "confined surface hydrologic connection." I question the inclusion of groundwater as connecting water. Regardless of how connections are defined, the final rule must clarify that it is not the Agencies' intent to claim jurisdiction over the connecting features. It is also important that the Agencies are clear on how jurisdictional/non-jurisdictional determinations made prior to the effective date of the final rule will be grandparented-in for implementation of projects.

Conclusion

To conclude, the only appropriate course of action is for EPA and the Corps to withdraw the Proposed Rule and work with stakeholders to develop revised regulatory language that provides clarity without overreach. I would encourage EPA and the Corps to start a sincere dialogue with the States, including Indiana, to develop clear, implementable language.

I would be happy to answer any follow-up questions in writing that the committee may have about the impact of the Proposed Rule on Indiana.

Exhibit A

STATE OF INDIANA
OFFICE OF THE GOVERNOR
State House, Second Floor
Indianapolis, Indiana 46204

Michael R. Pence
Governor

November 14, 2014

The Honorable Gina McCarthy
Administrator
United States Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington, DC 20460

The Honorable John McHugh
Secretary of the Army
101 Army Pentagon
Washington, DC 20310

Via email to: ow-docket@epa.gov

Re: Definition of "Waters of the United States" Under the Clean Water Act Proposed Rule:
Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Secretary McHugh:

We write to share our deep concerns about the proposed rule defining the scope of "waters of the United States" protected under the Clean Water Act (CWA) that was released on March 25, 2014, by the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) (collectively, the "Agencies"). We urge the Agencies to withdraw the proposed rule and re-engage stakeholders to craft a set of rules that creates clarity, not confusion.

In the wake of recent U.S. Supreme Court cases, regulated industries and state regulators needed clarification about which waters are subject to the federal CWA and which remain under state jurisdiction. Clarification would bring greater certainty and predictability, and, to the extent that the Agencies seek to provide clarity, it is a goal worthy of pursuit.

However, the proposed rule does not advance this goal. Instead, the proposed rule has created confusion among stakeholders. Many stakeholders in Indiana, most notably our agriculture and energy industries, believe that the proposed rule expands the scope of federal regulation. Our agriculture industry is particularly concerned that the proposed rule expands federal jurisdiction over wet features, rendering normal farming practices like fence construction and drainage maintenance subject to federal permitting requirements. We cannot stand idly by and allow this result.

Indiana's agriculture industry is working hard to help feed the world with 83 percent of land devoted to farms and forests and ranking 8th nationally in agriculture exports. Yet, agriculture finds its efforts thwarted by increasing federal regulation. Recent examples include changes to child labor laws and dust mitigation.

Similarly, Indiana's energy industry finds itself under siege from a barrage of federal regulations. Indiana is the top manufacturing state in the country by percentage of state gross domestic product, and we need a strong energy industry to provide affordable, reliable power for our economy. Their work is made more difficult by ever expanding, new and proposed federal regulations, including regulations on mercury and air toxin emissions, coal ash disposal, cooling water intake, and limitations on carbon dioxide emissions at new and existing power plants. Agriculture and energy are not alone in their concern. Builders, developers, manufacturers, and other stakeholders all fear that the proposed rules represent an expansion of federal jurisdiction. Given the federal government's recent proclivity for new regulations that increase the size and scope of the federal government, we share their fears.

We firmly believe that solutions to the challenges we face will most effectively emanate from our state capitals, not Washington, D.C. In Indiana, we are growing our economy, creating jobs, and feeding the world by eliminating bureaucratic red tape and reducing the size of government. We believe that Indiana knows best how to protect its waters, and we believe that the proposed rules inhibit Indiana's ability to manage its own affairs.

We respectfully urge the Agencies to withdraw the proposed rules, re-engage stakeholders, and prepare a set of proposed regulations that provide the clarity needed while establishing an appropriate balance between state authority and federal jurisdiction. We also draw the Agencies' attention to the comment letter filed by our Indiana Department of Environmental Management and Indiana State Department of Agriculture for further delineation of Indiana's concerns with the proposed rules.

Sincerely,

Michael R. Pence
Governor of Indiana

Sue J. Ellspermann
Lt. Governor and Secretary of Agriculture

Exhibit B

November 14, 2014

Gina McCarthy
Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

John M. McHugh
Secretary of the Army
101 Army Pentagon
Washington, DC 20310-0101

Re: Proposed Rule to Define "Waters of the United States,"
Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Secretary McHugh:

In April 2014, the Environmental Protection Agency and the U.S. Army Corps of Engineers (the Agencies) proposed a rule to redefine "waters of the United States" under the Clean Water Act (CWA), 79 Fed. Reg. 22,188 (Apr. 21, 2014). *After* its release, the Agencies reached out to States, the regulated community, and environmental groups in a series of meetings, speeches, and webinars seeking to explain the proposed rule and answer questions. The Agencies' belated efforts to outreach do not support an assertion that the Agencies sought public input.

Such efforts ignore the role States play as co-regulators under the Clean Water Act. The Clean Water Act is based on cooperative federalism. Under Section 303 of the Clean Water Act *all* States identify the designated uses of regulated waters within the State and the criteria to protect those uses. Under Section 401 of the Clean Water Act, *all* States review federal actions and certify whether that action will meet State water quality standards. Under Section 402 of the Clean Water Act, forty-six out of fifty States implement the NPDES permitting program. Under Section 404 of the Clean Water Act, two States implement the dredge and fill permitting program. In addition, States have their own statutes authorizing State water regulatory programs and defining waters of the State in some cases more broadly than the federal definition.

State regulators were not meaningfully consulted *before* the Agencies issued the proposed rule, and therefore were not afforded the opportunity to point out concerns in advance. We recognize that Agency representatives have expressed a willingness to make changes to the rule based on comments received during the comment period. We appreciate that willingness. However, our concerns relate to the legal rationale for the proposal and the implications of that rationale for State programs. Accordingly, we believe that the scope of changes necessary to respond to State concerns will be extensive. In such a situation, it is appropriate to withdraw or suspend a rulemaking and issue a supplemental proposal. This would allow the Agencies to consult with States *before* issuing a new proposal and receive public comment on new legal rationales and a revised jurisdictional scope.

Some of our specific concerns are discussed below.

I. Legal Rationale.

A. Jurisdiction Based on Ecosystem Connections.

According to the preamble to the proposed rule, the Agencies believe that the federal government can assert jurisdiction over water if they determine that the water has a "significant nexus" to a navigable or interstate water or territorial sea. The Agencies base this belief on language from the opinion of Justice Kennedy in *Rapanos v. United States*, 547 U.S. 715 (2006):

> Because Justice Kennedy identified significant nexus as the touchstone for CWA jurisdiction, the agencies determined that it is reasonable and appropriate to apply the significant nexus standard for CWA jurisdiction that Justice Kennedy's opinion applied to adjacent wetlands to other categories of water bodies as well (such as to tributaries of traditional navigable waters or interstate waters, and to other waters) to determine whether they are subject to CWA jurisdiction, either by rule or on a case-specific basis. 79 Fed. Reg. at 22,192.

The Agencies also assert a nexus that makes water jurisdictional can be based on use of water as habitat, water supply, or water retention, referring to that nexus as "connectivity." 79 Fed. Reg. at 22,195-96. The Agencies then specifically rely on a report developed by EPA's Office of Research and Development that summarizes studies of connections based on movement of organisms and water storage. *Id.* at 22,196.[1] Based on the Draft Report, the Agencies conclude that the following have a "significant nexus" to a navigable or interstate water or territorial sea:

- All tributaries (defined in the proposal to include manmade channels, ephemeral channels, and channels that flow underground), and

- All water that is "adjacent" (defined in the proposal to include all water located in (1) a "floodplain" (defined as an area formed by sediment deposition from inland or coastal waters under "present climactic conditions" and that is inundated during periods of "moderate to high flows"), (2) a "riparian area" (defined as an area where surface or subsurface hydrology directly influences ecological processes and plant and animal community structure), (3) an area that has a shallow subsurface hydrologic connection (not defined), or (4) an area with a confined surface hydrologic connection (not defined) to such water.

In addition, the Agencies propose to assert jurisdiction on a case-by-case basis over water that is not covered by the tributary or adjacent water categories where the Agencies determine the water has a significant nexus to a navigable or interstate water or territorial sea, alone or in combination with other similarly situated waters in the region. The determination of whether water falls in a category that is *per se* jurisdictional or is an "other water" with a significant nexus is left solely to the best professional judgment of EPA or Corps officials.

This legal rationale places no limits on federal jurisdiction, and accordingly, is a basis for asserting unlimited federal authority over land and water use. The EPA Science Advisory Board

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[1] Referring to "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" (September 2013 External Review Draft, EPA/600/R 11/098B) (hereinafter Draft Report).

(SAB) panel of scientists that reviewed the Draft Report appears to have concluded that all waters are connected. In fact, their letter dated October 17, 2014 questions why the Agencies do not assert jurisdiction over groundwater, and questions the basis for *any* exclusions from federal jurisdiction.[2]

We do not dispute the validity of scientific connections within an ecosystem. However, we strongly dispute any attempt to use such connections as a valid basis for defining the scope of federal jurisdiction. As noted by the SAB review panel, there are connections among surface water, groundwater, land, birds, insects, and mammals. The Clean Water Act does not, however, grant the Agencies authority to regulate on the basis of such connections.

These concerns arise in particular from the use of water retention, biological connections, and groundwater connections to assert federal jurisdiction. The Clean Water Act protects the quality of navigable water. To provide that protection, it also encompasses other, non-navigable surface water. It does not give the Agencies authority to control the allocation of water, to protect animals or habitat, or to regulate groundwater. Despite this, the legal rationale for the proposed rule suggests that the Clean Water Act includes all of these ecosystem components, giving the statute unlimited scope in contravention of its plain meaning and precedential interpretation.

B. Failure to Recognize the Limits of the Clean Water Act.

Contrary to the legal rationale put forth by the Agencies, the Clean Water Act is a grant of limited authority.

1. There is no Clean Water Act authority to control the allocation of water.

The Agencies propose to assert jurisdiction over water based on retention and flood control functions; however, the Clean Water Act expressly reserves that authority to states:

> It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this Act. It is the further policy of Congress that nothing in this Act shall be construed to supersede or abrogate rights to quantities of water which have been established by any State.

CWA § 101(g).

Section 101(g) was added to the Act in the 1977 amendments. According to its sponsor:

> This amendment came immediately after the release of the Issue and Option Papers for the Water Resource Policy Study now being conducted by the Water Resources Council. Several of the options contained in that paper called for the use of Federal water quality legislation to effect Federal purposes that were not strictly related to water quality. Those

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[2] *See* letter dated October 17, 2014 to Gina McCarthy from Dr. David T. Allen, Chair, EPA Science Advisory Board.

> other purposes might include, but were not limited to Federal land use planning, plant siting and production planning purposes. This State's jurisdiction amendment reaffirms that it is the policy of Congress that this act is to be used for water quality purposes only.

123 Cong. Rec. &. S19677-78, (daily ed., Dec. 15, 1977) (emphasis added) (floor statement of Senator Wallop).

EPA's role in the allocation of water is specified in Section 102(b) of the Act. That role is limited to *recommendations* for storage of water for water quality control in *federal* projects and *federal* licenses issued by the Federal Power Commission. In addition, Section 102(d) directed EPA to consult with States and river basin commissions and submit a report to Congress that analyzes the relationship between Clean Water Act programs (on the one hand) and programs by which of other federal agencies and States that allocate quantities of water (on the other hand).[3]

The statute and its legislative history are clear. The allocation of water is not within the purview of the Clean Water Act. Accordingly, jurisdiction cannot be based on water supply and water retention functions.

2. *There is no Clean Water Act authority to regulate birds, mammals, insects or their habitats.*

The Agencies propose to assert jurisdiction over water based on its use by birds, mammals, and insects. In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC),* 531 U.S. 159 (2001) the Supreme Court reminded us that the focus of the Clean Water Act is not just water quality generally, but the quality of navigable waters. This case recognizes that the Clean Water Act left many waters subject to State control. The Court held that the rock quarry at issue in that case was a "far cry, indeed, from the 'navigable waters' and 'waters of the United States' to which the statute by its terms extends." *Id.* at 173. In particular, the Court noted its concern that asserting jurisdiction over water based on use by migratory birds had the potential to impose on the States' traditional and primary power of land and water use. *Id.* at 174.

The quality of water to protect aquatic life is important, and States designate water for aquatic life uses and establish water quality criteria to protect those uses. Nevertheless, the fact that a bird, insect or mammal may move from one body of water to another is not relevant to the protection of water quality. If use by birds, insects, or mammals is a basis for establishing federal jurisdiction, there is no water beyond federal authority. Accordingly, we disagree that the Agencies can assert jurisdiction over water that lies wholly within a State on this basis.

3. *There is no Clean Water Act authority to regulate groundwater.*

The Agencies propose to assert jurisdiction over surface water based on groundwater connections. This basis for asserting federal jurisdiction is overly broad. As discussed below (See II., A.), it will impinge on State authority over both groundwater and land.

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[3] EPA developed a draft report in 1979. Section 102(d) was repealed by P.L. 104-66.

II. Impacts of the Proposed Rule on State Programs.

The proposed rule will impact State regulatory programs in ways that the Agencies have not considered.

A. Expansion in the Number of Point Sources and State Budgetary Impacts.

One potential consequence of the proposed rule is the expansion in the number of regulated point sources along with increased State budget impacts.

Although the Agencies disavow the intent to regulate the groundwater itself, they claim authority to regulate water that disappears underground (under the definition of "tributary") and water with "shallow subsurface hydrologic connections" (under the definition of "neighboring" which is a component of adjacency). It appears that, under the rule, the Agencies are treating groundwater as a conveyance. That rationale has significant implications that the Agencies may not have considered or have ignored.

State agencies authorize the location of waste treatment lagoons and solid waste disposal units. If groundwater is considered a conduit to a water of the U.S., then waste disposal into a State authorized lagoon or disposal unit could be considered a discharge into a water of the U.S. that EPA can regulate through a permit under Section 402 of the Act. In fact, some may argue that the water in the lagoon or the leachate from a landfill should be considered a water of the U.S.

In litigation, citizen plaintiffs have taken the position that if a discharge onto land or into groundwater can move through groundwater and reach a water of the U.S. that discharge is subject to regulation under the Clean Water Act. Some courts have agreed.[4] In one case, the Conservation Law Foundation alleged that septic systems are point sources that must obtain NPDES permits because nutrients from septic systems move through groundwater and impact navigable water. In that case, EPA disagreed that the septic systems were categorically point sources, arguing that an NPDES permit can be required for a discharge to groundwater *only* where it is directly and immediately connected hydrologically to surface water. *Conservation Law Foundation et al. v U.S. EPA, et. al.*, Case No. 1:10-cv-11455-MLW, Memorandum in Support of Defendants' Motion for Summary Judgment, at 20-21 (also noting that a hydrological connection to surface water via groundwater is a site-specific determination).[5]

In contrast to the position EPA took in its summary judgment motion in the *Conservation Law Foundation* case, in the proposed rule the Agencies take the position that groundwater connections *categorically* form the basis for Clean Water Act jurisdiction. Since the rule was proposed, more cases have been filed relying on this misguided theory. *See Wildearth Guardians v. The Western Sugar Cooperative,* (Case 1:14-cv-01503-BNB) (D. Colo., May 29, 2014) (alleging on-site wastewater ponds are point sources that discharge to waters of the U.S. through groundwater that has a significant biological, chemical and physical nexus to the South Platte River).

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[4] In *Hawai'i Wildlife Fund v. County Of Maui*, 2014 U.S. Dist. LEXIS 74256, *31 (D. Hawaii, May 30, 2014) the court held that the County of Maui is liable for discharging effluent into a wastewater reclamation facility without a NPDES permit where the effluent went into on-site injection wells to a shallow groundwater aquifer and eventually to the Pacific Ocean. In *N. Cal. River Watch v. City of Healdsburg*, 496 F.3d 993 (9th Cir. 2007), *cert. denied*, 552 U.S. 1180 (2008), the court held that a manmade pond created to treat sewage was a water of the U.S. due to a groundwater connection and the possibility of flooding.

[5] The court dismissed the case on jurisdictional grounds, holding the plaintiffs did not have standing.

As a result, if finalized, the rule could vastly expand the number of waste management units and land-based activities and point sources under the Clean Water Act, greatly increasing the workload and budget constraints of the forty-six States implementing the permitting program.[6] We emphatically note that the Agencies did not acknowledge the impact of this increased workload in their economic analysis of the proposed rule.[7]

B. Expansion of Federal Control Over Land and Water Use.

By asserting jurisdiction over areas of land where water flows in direct response to precipitation, the Agencies are blurring the distinction between nonpoint source runoff and point source discharges. If the area through which water runs is a water of the U.S., then the federal government has control of the use of that area. This is federal land use control that will affect State economic development decisions.

Indeed, all activities that drive economic development in the States would be affected by the proposed rule, including highway and road construction, pipeline projects, transmission line projects, farming, flood control, and public works projects. With federal permitting also comes the potential for a federal veto of State economic development projects.

For example, stream and wetland mitigation costs for state highway projects in the State of Washington can range anywhere from $180,000 to $2.28 million each.[8] The likelihood that roadside ditches would now be included as jurisdictional federal waters would increase those costs exponentially. The proposed rule could also have similar impacts on States that choose to build significant infrastructure related to renewable energy or natural gas projects in order to comply with EPA's proposed guidelines for states to reduce emissions from existing power plants under § 111(d) of the Clean Air Act.

In addition, assertion of jurisdiction based on groundwater impacts directly affects States' authority to allocate water resources. The implications of this rationale became very clear in a recent draft directive issued by the National Forest Service, titled: "Proposed Directive on Groundwater Resources Management" ("Directive"), 79 Fed. Reg. 25,815 (May 6, 2014).

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[6] This increase in the universe of regulated point sources could be the straw that breaks the back of State water quality permitting programs that already are struggling to meet the workload demands of regulating pesticide spraying and implementing new regulations, while funding decreases.

[7] The March 2014 Economic Analysis of Proposed Revised Definition of Waters of the United States fails to analyze or even consider any impacts on section 402 permitting programs and yet concludes that such impacts will be minimal.

[8] Washington State Department of Transportation, WSDOT Project Mitigation Costs Case Studies (May 2003).

Under this Directive, the Forest Service claims the authority to evaluate all applications for groundwater withdrawals not only on Forest Service lands, but also on adjacent lands, due to "hydraulic continuity." As in the proposed rule, the Directive has no clear definition of "adjacent." If, like EPA and the Corps, the Forest Service believes all waters are connected, it could likely claim that all state water rights applications must be evaluated by the Forest Service regardless of the distance from federal lands. Thus, the theory of federal jurisdiction espoused by EPA and the Corps has implications even beyond the Clean Water Act.

C. Failure to Provide Consistency and Clarity.

One stated purpose of the proposed rule is to provide consistency and clarity. See 79 Fed. Reg. at 22,189. However, the Agencies acknowledge geographic differences among the states.[9] In fact, in the same section of the preamble where the Agencies claim that the proposed rule promotes consistency, clarity, and certainty, they acknowledge that the definitions of riparian area and floodplain are not consistent, clear, or certain and will be left solely to the best professional judgment of EPA and Corps officials. 79 Fed. Reg. at 22,209-10.

The definition of tributary poses similar problems. The Agencies acknowledge geographic differences in determinations of whether or not an ordinary high water mark is present. See 79 Fed. Reg. at 22,202. These determinations too are left solely to the best professional judgment of EPA and Corps officials.[10]

We agree with the Agencies that there are geographic differences around the country, but giving federal officials authority to change the scope of federal jurisdiction based on location provides for inconsistency, obscurity, and uncertainty. To avoid this outcome, federal jurisdiction should be limited to water that is clearly subject to Clean Water Act authority based on navigability or a demonstrated ability to impact the quality of navigable water. Regulation of other water may be appropriate depending on location and function, but decisions based on such geographic differences are best left to the discretion of State officials. Federal jurisdiction must be consistent, clear, and certain.

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[9] 79 Fed. Reg. at 22,196 (recognizing differences in degree of connectivity based on geography); 79 Fed. Reg. at 22, 198 (recognizing jurisdiction over other water will vary based on geographic variability); 79 Fed. Reg. at 22,208-09 (seeking comment on placing geographic limits on the use of shallow subsurface hydrologic connections and confined surface hydrologic connection).

[10] There is reason for questioning that judgment. Corps officials admit that the identification of Ordinary High Water Marks (OHWMs) is inconsistent and subjective. See Matthew K. Mersel, U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory, Development of National OHWM Delineation Technical Guidance (Mar. 4, 2014), *available at* http://insideepa.com//index.php?option=com_iwpfile&amp;file=apr2014/epa2014_0760.pdf. Examples were provided in a March 30, 2004, hearing of the Water Resources and Environment Subcommittee of the House Committee on Transportation and Infrastructure on "Inconsistent Regulation of Wetlands and Other Water (House Doc. No. 108-58). In that hearing, one witness testified that a Corps official found that a tributary extended beyond its channel via a manmade ditch and a 25-year old skidder rut to establish a connection to a wetland. *Id.* at 81-82. Under the proposed rule, Corps officials would remain free to conclude that a skidder rut has an OHWM. Alternatively, the proposal would allow them to conclude that the skidder rut is a "confined surface hydrologic connection" that makes an otherwise isolated wetland a water of the U.S.

D. Expansion of the Scope of State Regulatory Programs

Another consequence of the proposed rule that the Agencies have overlooked is the impact on States' water quality standards programs. Like the impacts on permitting programs, the economic analysis accompanying the rule asserts, without analysis, that impacts on water quality programs implementing Section 303 of the Act will be minimal.

Currently, not all States include ephemeral waters in their regulatory programs. In comments on the 2011 guidance, Kansas noted that expanding federal jurisdiction to include ephemeral water would bring approximately 100,000 miles of dry erosion features into their State clean water act program, and Kansas would then be compelled to assign water quality standards and develop total maximum daily loads (TMDLs) for "what amounts to surface depressions that function only during sufficient precipitation."[11] After an extensive stakeholder process, the State of Missouri recently adopted changes to its stream classification program, expanding it to include all streams represented in the 1:100,000 scale of the USGS National Hydrology Dataset.[12] The decision to exclude default classification of smaller streams (those represented at the 1:24,000 scale) was based on an evaluation of the aquatic resources of the state.[13]

This increase is not limited to Kansas and Missouri. Indeed, it would be similar in most States. States are required under Section 305(b) of the Act to submit to EPA a description of the water quality of all federal waters within their borders. The most recent State reports can be found on the EPA's website.[14] Comparing the "waters of the United States" reported by States to recent USGS maps released by EPA shows a 131% increase in federal waters.

The Agencies have failed to quantify the burden on State regulators from this increased federal jurisdiction. EPA's ATTAINS database that tracks TMDL development reports a total of 3,533,205 river and stream miles in the United States based on data reported by States using the National Hydrography Dataset (NHD). The NHD is a database that interconnects and uniquely identifies the millions of stream segments or reaches that comprise the Nation's surface water drainage system and is based on the USGS 1988 1:100,000-scale Digital Line Graph (DLG) hydrography dataset integrated with reach-related information from the USEPA Reach File Version 3.0-Alpha release (RF3-Alpha).[15]

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[11] July 14, 2011 Comments of the State of Kansas on EPA and Army Corps of Engineers Guidance Regarding the Identification of Waters Protected by the Clean Water Act.

[12] *See* 10 CSR 20-7.031(2)(A) (adopting fishable, swimmable standards for: "1. All perennial rivers and streams; 2. All streams with permanent pools; 3. All rivers and streams included within the 1:100,000 scale National Hydrography Dataset (NHD) described in subsection (1)(R) of this rule."). This decision expanded the miles of classified streams in Missouri from 25,025 to a total of 109,870. Missouri Department of Natural Resources, Regulatory Impact Report, In Preparation for Proposing, An Amendment to 10 CSR 20- 7.031, Missouri Water Quality Standards (June 3, 2011), at 26.

[13] Missouri Department of Natural Resources, Regulatory Impact Report, In Preparation for Proposing, An Amendment to 10 CSR 20- 7.031, Missouri Water Quality Standards (June 3, 2011), at 35.

[14] http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2000_06_28_305b_98report_appenda.pdf

According to EPA's report on "The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest" (EPA/600/R-08/134) (Nov. 2008), even the high resolution NHD "may grossly underestimate the number and length of drainage networks," *i.e.*, ephemeral streams. ("Heine et al. (2004) reported that USGS 1:24,000-scale maps under-represented drainage networks by 64.6 percent in a study in Kansas").

EPA's currently approved Information Collection Request (ICR) (EPA ICR No. 1560.10, Nov. 2011) for both water quality reporting and TMDL development activities estimate the cost to States for those programs at $193,568,080 a year. Of that amount, $21,390,991 is for assessment activities. The remaining costs of $172,267,089 are for TMDL development and EPA assumes 4000 TMDLs a year, averaging $43,000 per TMDL.

If a final rule includes all ephemeral drainages and all "adjacent water" as waters of the U.S., then the cost to States to include these in their water quality programs will increase significantly. While the Agencies have failed to include these costs in the regulatory impact analysis of the proposed rule, some States have provided cost estimates. According to the State of Missouri, if it had to regulate all stream miles discernible at the 1:24,000 scale of the National Hydrology Dataset, it would add an additional 158,565 miles of stream (183,591 miles total) to its existing classified waters network and would more than double the State's monitoring costs from about $11.2 million a year to $24.2 million.[16]

The Agencies may argue that EPA will not require States to set standards for these waters or include them in monitoring programs; however, Section 303 of the Act applies to all waters of the U.S., and citizen plaintiffs could sue EPA for failing to force States to take such actions.[17]

This is a real impact of the rule on State regulatory programs that the Agencies must include in their economic analysis and take into account in the amount of federal funding provided for State programs under Section 106 of the Clean Water Act.

III. Failure to Comply With Executive Order 13121.

We note that the U.S. Small Business Administration Office of Advocacy recently sent a letter requesting the Agencies to withdraw the rule due to the failure to evaluate impacts on small businesses as required under the Regulatory Flexibility Act.[18] Similarly, the Agencies have failed to evaluate the federalism impacts as required under Executive Order 13132.

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[15] EPA's ATTAINS database also reports a total of 107,700,000 wetlands acres.

[16] *See supra* n.12 at 25, 35. If existing standards do not apply to the newly regulated waters, States also will have to incur significant costs developing new water quality standards.

[17] Indeed, such a lawsuit was filed in Missouri. *Missouri Coalition for the Environment v. Lisa P. Jackson*, Case No. 10-04169-CV-C-NKL. In that case, the court agreed with EPA that imposing federal standards was a discretionary action. However, the same issue currently is being litigated in the Fifth Circuit in *Gulf Restoration Network v. EPA*, Case No. 12-cv-677.

The Agencies have certified that: "This action will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government." 79 Fed. Reg. at 22,220 We disagree. Under the Executive Order, federalism implications include "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." As discussed above, the proposed rule will have these effects.

We acknowledge that the Agencies held some briefings for State and local governments on the subject of the proposed rule in 2011. Nevertheless, given the new direction the Agencies have taken with their reliance on ecological connections, water retention, and groundwater to establish federal jurisdiction, and the resulting impact on State authorities, we urge you to fully comply with Executive Order 13132 and conduct a meaningful dialogue with State governments.

In particular, we ask that the Agencies fully comply with the "Fundamental Federalism Principles" of section 2 and the "Federalism Policymaking Criteria" of section 3 of the Executive Order. The Agencies should strictly adhere to constitutional principles and statutory authority, providing States with maximum administrative discretion and relying on State policies to the maximum extent practicable. To do so, the Agencies must develop a supplemental proposal.

Before issuing a supplemental proposal, we ask the Agencies to work with States to identify the problems you are seeking to address and to focus the rulemaking on solving those problems. An after-the-fact explanation of a federal agency proposal is not sufficient. States support the goals of protection of water quality and clarity and want to work with the Agencies on the development of a rule that achieves those goals while recognizing geographic differences. An after-the-fact explanation of the intent of a proposed rule does not appropriately recognize the role that the Clean Water Act designates to States.

Only by working with States as co-regulators will the Agencies be able to fully comply with the Federalism Executive Order. Specifically, the dialogue we are requesting is necessary for the Agencies to be able to develop "a federalism summary impact statement, which consists of a description of the extent of the agency's prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met."

Conclusion

In summary, the proposed rule would fundamentally alter the ability of States to make decisions regarding the use of land within our borders. Such an expansion would also impact our ability to convey water supplies. Finally, such an expansion would impose significant costs on States by requiring States to designate the uses and assess the conditions of more waters, to develop total maximum daily loads for waters not meeting their uses, and to issue permits for more activities. Given the fact that States often regulate more waters than are encompassed by the current definition of "waters of the United States", it is not clear what benefit this expansion of federal authority is designed to achieve. It appears that the Agencies did not even consider existing State authorities when developing the proposed rule.

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[18] Letter dated October 1, 2014 from Winslow Sargeant, Ph.D., Chief Counsel for Advocacy.

For all of these reasons, we request that the Agencies withdraw or suspend this rulemaking and work with States to develop a supplemental proposal.

Sincerely,

Alabama Department of Environmental Management

Lance R. LeFleur

Lance R. LeFleur
Director
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Arizona Department of Environmental Quality

Henry R. Darwin
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cc: Ken Kopocis, EPA

Exhibit C

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November 14, 2014

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Via email to: ow-docket@epa.gov

Re: Definition of "Waters of the United States" Under the Clean Water Act Proposed
Rule: Docket ID No. EPA-HQ-OW-2011-0880

Dear Deputy Assistant Administrator Kopocis and Assistant Secretary Darcy:

The Indiana Department of Environmental Management (IDEM) and the Indiana State Department of Agriculture (ISDA) value the opportunity to provide the U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Army Corps of Engineers (Corps) with comments on the proposed national rulemaking *Definition of "Waters of the United States" Under the Clean Water Act* (79 Fed. Reg. 22188, April 21, 2014) (hereinafter, "Proposed Rule"). IDEM is responsible for the daily implementation of the Clean Water Act (CWA) water quality programs in Indiana, and ISDA serves as an advocate for Indiana agriculture at the local, state, and federal level.

The Proposed Rule falls far short of the clarity ostensibly sought by its promulgation, and multiple procedural errors only serve to enflame the significant angst instilled in the regulated community. These procedural and substantive shortcomings require the withdrawal of the Proposed Rule. Accordingly, and pursuant to the reasons that follow, Indiana respectfully requests that the U.S. EPA and the Corps (hereinafter, the "Agencies") withdraw the Proposed Rule and work with the States, as co-regulators, and all stakeholders, including regulated industry, to draft regulations that provide the clarity needed.

1. The Proposed Rule is premature and inappropriately relies on the draft Connectivity Report.

The U.S. EPA relied on a draft report entitled "*Connectivity of Streams and Wetlands to Downstream Waters: a Review and Synthesis of the Scientific Evidence*" for the scientific support for the Proposed Rule. However, this report had not been released when the Proposed Rule was issued, and it still has not been adequately peer-reviewed. It is extremely difficult, if not impossible, to appropriately respond to, and comment on, a proposed ruled based on a draft scientific study. The Proposed Rule should be withdrawn and held until after the report is finalized and has undergone a thorough peer-review process.

Furthermore, we are concerned that the draft report relies on studies that conclude that waters are connected through the movement of birds, animals, and insects. In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)*, 531 U.S. 159, 174 (2001), the Supreme Court rejected this type of connection as a basis for federal jurisdiction, stating it "would result in a significant impingement of the States' traditional and primary power over land and water use." We are also concerned that the draft report relies on studies of the impacts of storing water to assert that water is connected. Storage of water implies choices regarding water allocation that Congress expressly left to the States under section 101(g) of the Clean Water Act. If the draft report is to be used as a basis for establishing the Waters of the United States rule, studies unrelated to water quality should be removed from the report.

2. The Agencies failed to adequately engage affected stakeholders.

IDEM and ISDA are disappointed in the development and rollout of the Proposed Rule. Executive Order 13132, Section 3(c), notes that "With respect to Federal statutes and regulations administered by the States, the national government shall grant the States maximum administrative discretion possible." Section 3(d) requires agencies to consult with State and local officials in developing standards and where possible, defer to States. This is known as a federalism review. EPA and the Corps did not perform a federalism review, nor did they adequately engage the States, as co-regulators, in development of the Proposed Rule language. Only after the Proposed Rule was published did the U.S. EPA and the Corps hold meetings, conference calls and webinars to explain the intent of the rule. Even after those meetings, the intent and effect of the Proposed Rule was unclear with Agencies' staff frequently answering questions with, "We don't know" and "We'll have to figure that out." As an agency responsible for implementing Section 401 of the CWA, IDEM insists that states should have been consulted during the development of the Proposed Rule.

The Agencies also failed to consult with states on the financial impact of the Proposed Rule. The economic analysis for the Proposed Rule presumes no new economic burden on State agencies. In issuing a new rule proposal, the Agencies must include any additional costs that the States will incur to carry out their water quality programs and permitting programs as a result of the rule.

While we agree that in the wake of *Rapanos v. United States* there was a need to clarify the applicability of the CWA to certain waters, we contend that if the Agencies had conducted a federalism review and consulted with state and local officials, many of the misunderstandings regarding the intent of the proposal could have been avoided. The Proposed Rule must be withdrawn to comply with Executive Order 13132 and to allow the Agencies time to adequately engage affected stakeholders.

3. The Interpretive Rule guidance complicates the Proposed Rule and should be revoked.

The Interpretive Rule limits the applicability of Section 404(f) of the CWA. Although we recognize the Agencies' belief that the related Interpretive Rule broadens the exemptions to landowners, in reality, the Interpretive Rule only obfuscates the intent. The Interpretive Rule would not be necessary but for the expanded federal jurisdiction under the Proposed Rule.

Congress has already established permitting exemptions for farming and conservation practices. The Interpretive Rule raises the concern that normal farming practices not listed in the rule will require a permit. Additionally, it increases the cost of practices that are listed by requiring compliance with NRCS standards. Finally, the Interpretive Rule does not provide protection, even for listed activities that do comply with NRCS standards, because under the Proposed Rule's definition of waters of the U.S., planting and plowing could be considered activities that affect "the flow and circulation of waters of the United States. Both the Proposed Rule and the Interpretive Rule guidance should be withdrawn.

4. The Proposed Rule seeks to regulate many waters already regulated by Indiana.

The states know best how to protect the waters of their state. The U.S. Supreme Court has noted that:

> "Congress passed the CWA for the stated purpose of 'restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters.'...In so doing, Congress chose to 'recognize, preserve, and

> protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution...."[1]

Admittedly, *Rapanos* leaves open the jurisdictional limitations under the CWA, but this open question should be resolved in favor of the states. State regulators are more familiar with and accountable to their regulated industries than distant federal regulators. We do not need this additional layer of federal regulation in order to realize the goal of the CWA. Indiana can get there on its own. The Proposed Rule should be withdrawn so that Indiana can seek the right solutions for Indiana.

5. The Proposed Rule does not add complete clarity to what is regulated.

Indiana prefers rules over guidance for both clarity and enforceability. We find the inclusion of specific exceptions/exemptions/exclusions in addition to those permitting exemptions already existing in Section 404(f) of the Clean Water Act useful. If, during implementation, these exceptions are treated as iron clad and not second guessed, the added specificity will expedite the determination of the need for, and the issuance of, some 401 water quality certifications. However, we stress that the exemptions and other important aspects of the final rule must be clarified.

a. The final rule must clarify the full scope of the exemption for a waste treatment system and other waste management systems.

Indiana agrees that "waste treatment systems, including treatment ponds and lagoons, designed to meet the requirements of the Clean Water Act" are not waters of the U.S. Yet, the proposed rule creates confusion over this provision by adding a comma after "lagoons" thereby implying that all waste treatment systems must be designed to meet Clean Water Act requirements. This is not true today as waste treatment systems that do not discharge to waters of the U.S. are not subject to Clean Water Act requirements. The comma after "lagoons" must be removed.

Also, further definition of what is and is not included as a waste treatment system must be added. We suggest language such as: "*all components located behind the outfall of an NPDES permit*" be inserted after "lagoons" in the Proposed Rule language. Additionally, it must be clearly stated that permitted storm water collection systems (particularly MS4s) fall within the exclusion of "waste treatment systems."

b. The final rule must clarify the complete description of what portions of ditches are not jurisdictional.

Regarding the exclusion of "ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow," the Agencies should clarify in the final rule that such ditches that drain uplands, but do eventually discharge to waters of the U.S. are not jurisdictional throughout the portion of the ditch that is upstream of the traditional waters of the United States defined in proposed (a)(1) through (a)(5). Additionally, a definition of upland should be included in the final rule that clarifies that upland is all land other than wetlands even when rainfall results in ponding of water in flat areas. Further, manmade drainage ditches that drain uplands only should not be jurisdictional regardless of the number of months it holds water. Finally, a landowner should be able to use a ditch to drain a non-jurisdictional water, such as a private pond or prior converted cropland, without turning that water body into a water of the U.S.

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[1] Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (2001)

c. The final rule must clarify the definition of "significant nexus."

IDEM and ISDA have concerns with the use of the term "significant nexus" in the Proposed Rule. First, the courts are split as to whether significant nexus is the proper test under *Rapanos*, and, therefore, we question its inclusion in the Proposed Rule. Such a term should not be used to justify federal jurisdiction over broad categories of water such as ephemeral water, or to bring "other waters" under federal control. Alternatively, if the significant nexus test is to be implemented, it must be as clear as possible. We urge a simplification of the language that accurately reflects the Supreme Court's decision in *Rapanos*. In his description of significant nexus, Justice Kennedy identified waters that "affect, the chemical, physical, **and** biological integrity" which is critically different from saying "affect the chemical, physical, **or** biological integrity." This definition should be coupled with the plurality's "relatively permanent water" test to determine the extent of federal jurisdiction intended under the Clean Water Act.

d. The final rule must clarify that connecting waters will themselves not be considered jurisdictional.

The proposed definition of "tributary" includes water that goes underground and the proposed definition of "neighboring" includes water that has a connection to navigable water only through shallow groundwater or through a "confined surface hydrologic connection." We question the inclusion of groundwater as connecting water. Regardless of how connections are defined, the final rule must clarify that it is not the Agencies' intent to claim jurisdiction over the connecting features themselves

e. The final rule must clarify the status of existing jurisdictional determinations.

The Proposed Rule does not address the status of existing jurisdictional determinations. It is important that the Agencies are clear on how jurisdictional/non-jurisdictional determinations made prior to the effective date of the final rule will be grandparented in for implementation of projects.

Indiana reiterates that the appropriate course of action is to withdraw the Proposed Rule and work with stakeholders to develop revised regulatory language that provides clarity without overreach. We encourage continued dialogue with the States, including Indiana, as the Agencies work to develop clear, implementable language for future reproposal and public comment. In the long run, Indiana believes that such a process will speed the completion of the regulatory process and result in an implementable final rule that provides the clarity the Agencies are seeking.

Sincerely,

Thomas W. Easterly
Commissioner
Indiana Department of Environmental Management

Ted McKinney
Director
Indiana State Department of Agriculture

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JON BRUNING
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Comment from the Attorneys General of the States of Oklahoma, West Virginia, Nebraska, Alabama, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Montana, North Dakota, Ohio, South Carolina, South Dakota, Utah and Wyoming on Proposed EPA Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units[1]

Docket ID No. EPA–HQ–OAR–2013–0602
submitted at regulations.gov
and via email to: *A-and-R-Docket@epa.gov*

On June 18, 2014, EPA proposed emission guidelines for carbon dioxide emissions from existing fossil fuel-fired power plants, invoking its authority under Section 111(d) of the Clean Air Act ("CAA"), 42 U.S.C. § 7411(d). *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34,830 (June 18, 2014) (hereinafter "Proposal"). EPA's proposal attempts to use the Clean Air Act to override states' energy policies and impose a national energy and resource-planning policy that picks winners and losers based solely on EPA's policy choices, forcing states to favor renewable energy sources and demand-reduction measures over fossil fuel-fired electric production. But the Clean Air Act generally and Section 111(d) specifically do not give EPA that breathtakingly broad authority to reorganize states' economies. "Congress . . . does not, one might say, hide elephants in mouseholes." *Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457, 468 (2001). Congress did not hide the authority to impose a national energy policy in the "mousehole" of this obscure, little-used provision of the Clean Air Act, which EPA has only invoked five times in 40 years.

The proposed rule has numerous legal defects, each of which provides an independent basis to invalidate the rule in its entirety.

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[1] : The States of Georgia, Indiana, Montana, North Dakota, Ohio and Utah, among others, also intend to file additional separate comments that address the proposed rule.

First, the proposed rule is unlawful because EPA has chosen to regulate coal-fired power plants under Section 112 of the Clean Air Act, 42 U.S.C. § 7412. Section 111(d) specifically prohibits EPA from invoking Section 111(d) where the "source category . . . is regulated under section [112]. . . ." 42 U.S.C. § 7411(d)(1)(A)(i). EPA should abandon its cynical attempt to evade this specific prohibition on its authority found in the Clean Air Act's plain text.

Second, the proposed rule is unlawful because EPA has not finalized Section 111(b) "new source" regulation of carbon dioxide emission from coal-fired power plants, which is legally necessary before any Section 111(d) regulation of those plants. And given that the *proposed* Section 111(b) new source standards are patently unlawful, no such predicate is likely forthcoming.

Third, the proposed rule impermissibly expands EPA's authority into the management of states' energy generation and usage. Rather than limiting itself to EPA's narrow mandate of air pollution control, the proposed rule forces states to abandon their sovereign rights in favor of a national energy consumption policy.

Fourth, the proposed rule includes inflexible mandates that each state *must* achieve, rather than the guidelines and appropriate procedures for states to use in establishing standards of performance for sources under their jurisdiction that are actually authorized by Section 111(d). This attempt to federalize areas of energy policy improperly proposes to negate states' authority to determine that EPA's guidelines are inconsistent with factors such as consideration of costs, physical impossibility, energy needs, and the "remaining useful life of the existing source."

Fifth, in applying these standards of performance, states are limited to emission standards that can actually be achieved by existing industrial sources through source-level, inside-the-fenceline measures. The proposal's attempt to force states to regulate energy consumption and generation throughout their jurisdictions, in the guise of reducing emissions from fossil fuel-fired power plants, violates Section 111(d)'s plain-text requirement that the performance standards established for existing sources by the states must be limited to measures that apply at existing power plants themselves.

Sixth and finally, even assuming *arguendo* that EPA has authority to impact energy policy decisions under Section 111(d), the proposed rule's attempt to federalize control over state energy policy is inconsistent with the Federal Power Act. It is unreasonable for EPA to propose regulation under Section 111(d) that would allow precisely the type of federal control over state decision-making that Congress denied to the federal government in the context of the Federal Power Act.

* * *

Given the multitude of legal deficiencies in its proposal, some of which go to the heart of its authority to regulate fossil-fuel-fired power plants under Clean Air Act Section 111(d), EPA should honor the Act's core statutory limitations on its authority and formally determine that Section 111(d) standards are not appropriate for fossil fuel-fired power plants. If EPA does finalize Section 111(d) standards for fossil-fuel-fired power plants, it should not perpetuate the unlawful act by attempting to reorganize states' energy economies, but should instead promulgate emission guidelines based on the best system of emission reduction that is actually achievable at individual facilities, which states could then consider in establishing performance standards to individual power plants in their jurisdictions.

I. The Clean Air Act Unambiguously Prohibits EPA from Regulating Power Plants Under Section 111(d) Now That EPA Has Chosen To Regulate Those Plants Under Section 112

The Clean Air Act prohibits EPA from regulating any emissions from a "source category" under Section 111(d) where the "source category . . . is regulated under section [112] . . . ." 42 U.S.C. § 7411(d)(1)(A)(i).[2] This prohibition is so clear that even EPA admits that the "literal" meaning of this language is that it "c[an] not regulate *any* air pollutant from a source category regulated under section 112." EPA, *Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units* at 26 (hereinafter "Legal Memorandum" or "Mem.") (emphasis added). Or, as the Supreme Court has explained, "EPA may not employ [Section 111(d)] if existing stationary sources of the pollutant in question are regulated under . . . the 'hazardous air pollutants' program, [Section 112]." *Am. Elec. Power Co., Inc. v. Connecticut*, 131 S. Ct. 2527, 2537 n.7 (2011). This unambiguous statutory prohibition is grounded in Congress's understanding that existing sources—unlike new sources—should not be subject to double regulation, under two different regulatory regimes, in light of special concerns such as reliance and sunk costs.

In 2000, EPA took the discretionary step of classifying power plants as part of a "source category" under Section 112. 65 Fed. Reg. 79,825, 79,830 (Dec. 20, 2000). Then, in 2012, EPA imposed one of the most expensive regulations in the agency's history on these power plants under Section 112. 77 Fed. Reg. 9,304 (Feb. 16, 2012). This regulation, which is commonly known as the Mercury and Air Toxics Standard or the Utility MACT Rule, imposed $9.6 billion in annual costs on the electric generating industry and nearly $11 billion in total annual social costs, and will cause the retirement of more than 34 gigawatts of fossil fuel-fired electric generating capacity. *See id.* at 9,413, 9,425; Institute for Energy Research, *Impact of EPA's Regulatory Assault on Power Plants* (June 12, 2012). Given that existing coal-fired power plants are now extensively regulated under Section 112, what EPA has admitted are the "literal" terms of the Clean Air Act prohibit EPA's present effort to impose yet more onerous regulations on these same plants under Section 111(d). Mem. at 26.

Indeed, one recent study projects that the Proposal will result in from 46 to *169* additional gigawatts retired unless EPA makes significant corrections. *See* NERA Economic Consulting, on behalf of American Coalition for Clean Coal Electricity et al., *Potential Energy Impacts of the EPA Proposed Clean Power Plan* (October 2014). Specifically, the study projects coal-unit retirements of between 97 and 220 gigawatts, as compared to 51 gigawatts under a baseline scenario. *Id.* at 15, Fig. 4. Retirements on this scale are likely to seriously threaten the reliability of our nation's electric supply. State regulators and industry stakeholders have warned that the proposal will force them to choose between meeting its requirements at the risk of potentially violating FERC reliability mandates, or complying with those mandates at the risk of failure to comply with the proposal. Southwest Power Pool predicts the proposal will increase retirements in its area by 200%, risking "rolling blackouts or cascading outages" with significant economic, health, and safety impacts.[3] And the Electric Reliability Council of Texas warns that the proposal "will have a significant impact on the planning and operation of" its grid, forcing the retirement of between 3.3 and 8.7 gigawatts in its region alone—in short, the proposal threatens "a harmful impact on reliability."[4] North Dakota officials have expressed concern that FERC may reject on reliability grounds the states' 111(d) plans, and may even impose significant penalties for any blackouts and similar failures that might result from states' efforts to meet EPA's requirements.[5]

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[2] Several of the commenting states have filed suit to invalidate EPA's proposal on these grounds.

FERC Commissioner Moeller has warned that the proposed shift from least-cost to least-emission dispatch priorities "has the potential to completely undermine the market principles that underpin dispatch of the system."[6] And the North American Electric Reliability Corporation ("NERC"), the international body specifically tasked by Congress with monitoring reliability, has recently determined that "Essential Reliability Services may be strained by the proposed" rule, and that the rule's requirements "represent a significant reliability challenge."[7] Specifically, NERC observes that, among other factors, "[p]ipeline constraints and growing gas and electric interdependency challenges" and the need for "more transmission and new operating procedures" will limit states' and utilities' ability to comply with the proposal while preserving reliability.[8] And the retirements of coal-fired units due to the proposal will "lessen[] the industry's diversification of fuel sources."[9] Cumulatively, these issues mean the proposal will impair the reliability of the grid, especially under extreme weather conditions such as last winter's "polar vortex."[10]

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[3] Southwest Power Pool, Comments on 111(d) Proposal, at 6 (Oct. 9, 2014).

[4] ERCOT Analysis of the Impacts of the Clean Power Plan, at 1, 10 (Nov. 17, 2014). *See also id.* at 18 ("The proposed CO_2 emissions limitations will result in significant retirement of coal generation capacity, could result in transmission reliability issues due to the loss of fossil fuel-fired generation resources in and around major urban centers, and will strain ERCOT's ability to integrate new intermittent renewable generation resources.").

[5] InsideEPA, "States Face ESPS Dilemma Over Whether To Comply With EPA Or FERC," Oct. 8, 2014.

[6] Response of FERC Commissioner Moeller to Additional Questions For the Record from the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Energy and Power, at 5 (Aug. 26, 2014).

[7] NERC, Potential Reliability Impacts of EPA's Proposed Clean Power Plan, at 1, 2 (Nov. 2014).

[8] *Id.* at 2.

[9] *Id.* at 9; *see also id.* at 19 & Fig. 7 (discussing impact of proposal on retirements).

[10] *See id.*

These retirements are likely to impose significant costs on ordinary citizens throughout the country. The NERA study projects an increase in total consumer energy costs of between $366 billion and $479 billion over the period 2017-2031. *Potential Energy Impacts* at 21, Fig. 11. (The cost of natural gas for non-electricity energy services is specifically predicted to increase by between $15 billion and $144 billion.) This includes an increase of between 13 and 15 percent in electricity prices for residential customers. *Id.* at 25, Fig. 16. These increases will not be evenly distributed. Although prices are projected to rise in all states, the impact will be heaviest in the West, with Texas projected to suffer as much as a 54% increase in prices across all sectors. *Id.* at 25-26, Figs. 16 & 17.

EPA's only legal justification for departing from the Clean Air Act's "literal" text is based upon what EPA has admitted was "a drafting error," *see* 70 Fed. Reg. 15,994, 16,031 (Mar. 29, 2005), which was properly excluded from the U.S. Code. Specifically, EPA claims that a single clerical entry in the 1990 Amendments to the Clean Air Act somehow renders the plain text of the Act ambiguous and thus permits EPA to regulate. Mem. at 25-27. This argument cannot withstand scrutiny. The clerical entry upon which EPA bases its entire rule was a non-substantive "conforming amendment," which was erroneously included in the 1990 Amendments to update a cross-reference to Section 112, tracking the rearrangement of that section elsewhere in the Amendments. But the 1990 Amendments also fundamentally altered Section 111(d) and, in doing so, made the "conforming amendment" impossible to execute. In this exact situation—which is common in modern, complex legislation—the uniform practice is to give full meaning and effect to the substantive change in the law, and to ignore the non-substantive "conforming amendment" as a scrivener's error.[11] That is exactly what occurred here, as the codifier of the U.S. Code excluded the conforming amendment because it "could not be executed." Revisor's Note, 42 U.S.C. § 7411. Unsurprisingly, EPA has not cited a single decision, from any area of law, giving any meaning to a clerical change that was rendered moot by a substantive amendment. *See* Mem. at 26-27. To the contrary, controlling caselaw provides that where a mistake in renumbering a statute and correcting a cross-reference conflicts with a substantive change, the mistake should not be considered when construing the substantive provision. *See, e.g., Am. Petroleum Inst. v. SEC*, 714 F.3d 1329, 1336-37 (D.C. Cir. 2013).

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[11] *See, e.g.*, Revisor's Note, 5 U.S.C. app. 3 § 12; Revisor's Note, 7 U.S.C. § 2018; Revisor's Note, 8 U.S.C. § 1324b; Revisor's Note, 10 U.S.C. § 869; Revisor's Note, 10 U.S.C. § 1074a; Revisor's Note, 10 U.S.C. § 1407; Revisor's Note, 10 U.S.C. § 2306a; Revisor's Note, 10 U.S.C. § 2533b; Revisor's Note, 11 U.S.C. § 101; Revisor's Note, 12 U.S.C. § 1787; Revisor's Note, 12 U.S.C. § 4520; Revisor's Note, 14 U.S.C. ch. 17 Front Matter; Revisor's Note, 15 U.S.C. § 1060; Revisor's Note, 15 U.S.C. § 2081; Revisor's Note, 16 U.S.C. § 230f; Revisor's Note, 18 U.S.C. § 1956; Revisor's Note, 18 U.S.C. § 2327; Revisor's Note, 20 U.S.C. § 1226c; Revisor's Note, 20 U.S.C. § 1232; Revisor's Note, 20 U.S.C. § 4014; Revisor's Note, 21 U.S.C. § 355; Revisor's Note, 22 U.S.C. § 2577; Revisor's Note, 22 U.S.C. § 3651; Revisor's Note, 22 U.S.C. § 3723; Revisor's Note, 23 U.S.C. § 104; Revisor's Note, 26 U.S.C. § 105; Revisor's Note, 26 U.S.C. § 219; Revisor's Note, 26 U.S.C. § 613A; Revisor's Note, 26 U.S.C. § 1201; Revisor's Note, 26 U.S.C. § 4973; Revisor's Note, 26 U.S.C. § 6427; Revisor's Note, 29 U.S.C. § 1053; Revisor's Note, 33 U.S.C. § 2736; Revisor's Note, 37 U.S.C. § 414; Revisor's Note, 38 U.S.C. § 3015; Revisor's Note, 39 U.S.C. § 410; Revisor's Note, 40 U.S.C. § 11501; Revisor's Note, 42 U.S.C. § 218; Revisor's Note, 42 U.S.C. § 300ff-28; Revisor's Note, 42 U.S.C. § 3025; Revisor's Note, 42 U.S.C. § 5776; Revisor's Note, 49 U.S.C. § 47115.

And even if one were to accept EPA's assertion that it must give meaning to an impossible-to-execute clerical amendment, Mem. at 26, the proposed rule would still be unlawful. If the conforming amendment is executed separately from the substantive amendment, two different prohibitions on EPA's Section 111(d) authority would arise. Under one prohibition—in text of the Clean Air Act as reflected in the United States Code—EPA would be prohibited from regulating under Section 111(d) any emissions from any source categories actually regulated under Section 112. Under the "other" prohibition—the one embodied by the conforming amendment—Section 111(d) could not be used to regulate pollutants subject to regulation under Section 112, even if EPA has chosen not to regulate the particular source category at issue. (Given that EPA is not required to regulate all sources of Section 112-regulated hazardous air pollutants under Section 112, 42 U.S.C. § 7412(k)(3)(B)(ii), this category would almost certainly leave some sources of hazardous air pollutants unregulated. Indeed, a special provision of Section 112 permits EPA significant leeway not to regulate power plants at all under Section 112. *Id.* § 7412(n)(1)) Thus, if EPA "give[s] effect, if possible, to every word Congress used," *Reiter v. Sonotone Corp.*, 442 U.S. 330, 339 (1979), it would be prohibited from invoking Section 111(d) *both* to regulate any source categories actually regulated under Section 112 *and* to regulate any pollutants subject to regulation under Section 112. Accordingly, even if EPA's approach of executing the conforming amendment into a separate "version" of Section 111(d) were permissible—which, to be clear, it is not—this would not salvage the proposed rule.

II. The Proposed Section 111(d) Rule Is Illegal Because EPA Has Not Finalized any Lawful Rule for Equivalent New Sources

Section 111(d) authorizes EPA to prescribe regulations under which States shall establish standards of performance for "any existing source for any pollutant . . . *to which a standard of performance under this section would apply if such source were a new source*." 42 U.S.C. § 7411(d)(1)(A)(ii) (emphasis added). As EPA has acknowledged since 1975, this provision prohibits EPA from invoking Section 111(d) unless and until it has completed and finalized a lawful rule for "new sources of the same type." 40 Fed. Reg. 53, 340, 53,340 (Nov. 17, 1975); *see also* 39 Fed. Reg. 36,102, 36,102 (Oct. 7, 1974) (proposed rule) (predicates for use of 111(d) include "[a] standard of performance for affected facilities *has been* promulgated under section 111(b) of the Act") (emphasis added). Put another way, promulgation of lawful new source performance standards is "a necessary predicate for the regulation of existing sources" under Section 111(d). 79 Fed. Reg. 1,430, 1,496 (Jan. 8, 2014). In the present rulemaking, EPA claims that it will satisfy that "necessary predicate" through two proposed rulemakings, once they are finalized: (1) the proposed new source performance standards for new fossil fuel-fired power plants ("New Source Rule"), 79 Fed. Reg. 1,430 (Jan. 8, 2014); and (2) performance standards for modified and reconstructed fossil fuel-fired power plants ("Modified Source Rule"). *See* Proposal, 79 Fed. Reg. 34,852 (June 18, 2014). EPA's arguments are flawed as a matter of law, and as a result the proposed Section 111(d) rule will be entirely unlawful.

First, the New Source Rule—if finalized in anything like its proposed form—will not be a *lawful* predicate for the proposed Section 111(d) rule. The New Source Rule is based upon EPA's claim that the "best system of emission reduction" for carbon dioxide emission from coal-fired power plants is partial carbon capture and storage ("CCS"). 79 Fed. Reg. at 1,430. But as 16 States explained in their comment letter to EPA, CCS is not the "best system of emission reduction" because CCS has not been shown to be reasonably reliable, efficient, broadly available, or economically feasible in *any* commercial setting. *See* Letter from Sixteen States to Gina McCarthy, Administrator, EPA at 2-8 (May 9, 2014) (docketed at EPA-HQ-OAR-2013-0495-9505) (hereinafter "States' Comment Letter"). In addition, as the States also explained, the proposed New Source Rule violates the Energy Policy Act of 2005 because EPA's claim that CCS technologies have been "adequately demonstrated" is based on government-funded projects that would not be economically viable without government funds; the 2005 Act expressly forbids EPA from relying on these projects when setting standards under Section 111. *See* States' Comment Letter at 8-9. Finally, the New Source Rule is arbitrary and capricious, as the States' Comment Letter articulated, because EPA's justifications for the rule are contrary to the agency's own predictions. Specifically, EPA's central rationale for promulgating the proposed New Source Rule—that the proposal will protect public health and address climate change—is entirely eliminated by EPA's own concession that the proposal "will result in negligible CO_2 emission changes, quantified benefits, and costs by 2022." 79 Fed. Reg. 1,430, 1,433. *See* States' Comment Letter at 10-11.

Second, EPA's fallback attempt to argue the Modified Source Rule could provide the "necessary predicate" for its Section 111(d) proposal when the New Source Rule is held unlawful is a transparent and illegal end-run around Section 111's text and structure. *See* 79 Fed. Reg. at 34,852. Unsurprisingly, EPA can point to no authority or prior examples to support such an approach, because it is plainly unlawful. Under Section 111(d)'s plain text, the predicate rulemaking must lawfully regulate equivalent "new" sources—not simply equivalent modified or reconstructed sources *only*. *See* 42 U.S.C. § 7411(d)(1)(A)(ii). The term "new source" is not ambiguous in this context. Instead, Section 111(a)(2) of the Act defines it as "any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source." 42 U.S.C. § 7411(a)(2). This statutorily mandated sequence reflects Congress's understanding that, because regulation of existing sources raises special issues of reliance and sunk costs, regulation of those existing sources should only be implemented after regulation of all new sources (including but not limited to modified sources) has been lawfully finalized. Consistent with this plain text, EPA must first promulgate *lawful* standards of performance for new sources (*including* modified sources), and only thereafter may require the states to regulate equivalent existing sources.

As multiple submitted comments on the modified-source proposal demonstrate, the EPA's position that Section 111's ostensible silence as to whether a source that undergoes modifications ceases to be an existing source subject to 111(d) standards allows it to subject sources to *both* the 111(b) modified-source and 111(d) existing-source regimes is unlawful. But such arguments from silence are an "untenable" means of proving agency authority. *See infra* Section III; *see also Aid Ass'n for Lutherans v. U.S. Postal Serv.*, 321 F.3d 1166, 1174-75 (D.C. Cir. 2003). Both the structure of Section 111 and its subsections defining "new" and "existing" sources make perfectly clear that these are mutually exclusive terms: an "existing" source that undergoes modifications becomes a "modified" source, *which is treated as a "new" source for Section 111's purposes*, and therefore falls under 111(b) alone. Because EPA may not lawfully issue a Section 111(b) modified source rule that covers only modified sources, let alone impose *both* that rule *and* a 111(d) rule on existing sources that undergo modifications, the modified-source rule will not and cannot provide a lawful predicate for the existing-source rule.

III. Section 111(d) Cannot Be Used To Override State Authority To Manage Power Resources

One of a state's core police powers is the power to promote the health and economic well-being of its citizens, including through the management of its energy and air quality resources. This sovereign power includes the authority to regulate—or not to regulate—the production and local distribution of electricity to its citizens. In states with significant coal resources, where mining operations are important employers and coal-fired energy can be generated inexpensively, states have authority to do so. Similarly, states that choose to exploit renewable energy resources, whether because those resources are affordable or because their citizens are willing to pay a premium for them, are free to follow that path. The Clean Air Act's role is limited to ensuring that, whatever path each state chooses, new and modified power plants meet state-of-the-art technology standards and pollution from all sources in a state does not interfere with national air quality goals.

In contrast, under the current Section 111(d) proposal, EPA's binding emission "goals" applicable to each state would require states to shift electric generation from coal- to gas-fired plants, to increase electric generation from sources other than fossil fuel-fired power plants, and to take measures that reduce electricity consumption or increase energy efficiency at the end-use, consumer level. In this way, the proposal combines a renewable energy portfolio with demand-side control measures to create a *de facto* national energy policy, at the expense of state authority and economic freedom. And there is no limiting principle to EPA's asserted reach under the proposal. Under EPA's reading of the Act, the agency could require states to mandate that consumers dim their lights on alternate days, limit home builders to constructing only two-story buildings, or shutter public schools during periods of peak energy usage. Because virtually all human activity in the modern age depends on electricity, regulation of any aspect of that activity could be viewed as affecting electricity production, which in turn affects power plants' carbon dioxide emissions. EPA's approach converts the obscure, little-used Section 111(d) into a general enabling act, giving EPA power over the entire grid from generation to light switch. This, in turn, would give EPA plenary authority over much of the national economy.

The putative legal rationale for the Section 111(d) proposal is, primarily, based on EPA's claim that the statutory term "best system of emission reduction," and in particular its component term "system," are ambiguous and constitute a significant delegation of authority to regulate electricity production, transmission, distribution, and consumption in an unprecedented and unlimited manner. *See, e.g.*, Proposal, 79 Fed. Reg. at 34,885-86. But Section 111(d)'s narrow terms do not countenance this unlimited assertion of power.

EPA's Section 111(d) proposal makes a fundamental error that leads to reversal of agency action on a regular basis: an argument that Congress's failure to expressly withhold authority to take some action constitutes a license to do so. But as courts must frequently remind agencies, "[a]mbiguity is a creature not of definitional possibilities but of statutory context." *Brown v. Gardner*, 513 U.S. 115, 118 (1994). "Were courts to *presume* a delegation of power absent an express *withholding* of such power, agencies would enjoy virtually limitless hegemony, a result plainly out of keeping with *Chevron* and quite likely with the Constitution as well." *Ethyl Corp. v. EPA*, 51 F.3d 1053, 1060 (D.C. Cir. 1995); *see also Aid Ass'n for Lutherans v. U.S. Postal Serv.*, 321 F.3d 1166, 1174-75 (D.C. Cir. 2003) (vacating USPS rule limiting non-profit organizations' use of reduced mailing rates where the Service took the position "that the disputed regulations are permissible because the statute does not expressly foreclose the construction advanced by the agency," which the court determined to be "entirely untenable under well-established case law") (collecting cases).

Taken in context, Section 111(d) has rightly been understood as a regulatory backwater, as Congress never intended it to be a major Clean Air Act regulatory program.

According to EPA, in the 44 years since Section 111(d) was first promulgated as part of the Clean Air Amendments of 1970, only *five* source categories have been subject to regulation under Section 111(d). Mem. at 9-10. Some of these source categories contained as few as 31 sources nationwide,[12] and many were not present throughout the country (for example, phosphate fertilizer plants were found in only 17 states, and primary aluminum plants in only 16).[13] And the only previous 111(d) rule to address common, nationwide sources, the 1996 landfill rule—the only 111(d) rulemaking since 1980—bore projected annual costs of about 1.5% of those of the current proposal.[14] By any relevant metric, the scope of EPA's current Section 111(d) proposal dwarfs these past measures:

	Annualized Costs	**Number of Affected Sources**
Current Proposal	$8.8B ($2011)[15]	1,228[16]
1977 Phosphate Fertilizer Rule[17]	Not specified	53[18]

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[12] *See* Table *infra*.
[13] *See Final Guideline Document: Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants*, EPA-450/2-77-005, § 3.1, at 3-5 to 3-15 (Tables 3-3 to 3-6) (Mar. 1977); *Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants*, EPA-450/2-78-049b, § 3.1.1, at 3-3 to 3-5 (Table 3-1).
[14] *See* Table *infra*.
[15] Proposal, 79 Fed. Reg. at 34,839, 34,840 (Table 2).
[16] EPA, *Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants*, at 3-47 (June 2014).
[17] 42 Fed. Reg. 12,022 (Mar. 1, 1977) ("control of atmospheric fluoride emissions from existing phosphate fertilizer plants").

	Annualized Costs	Number of Affected Sources
1977 Sulfuric Acid Plant Rule[19]	Not specified	251[20]
1979 Kraft Pulp Mill NSPS[21]	$200M to $441M[22] (est. $790M to $1.74B in $2011[23])	120[24]
1980 Primary Aluminum Plant Rule[25]	Not specified	31[26]
1996 Municipal Solid Waste Landfill Rule[27]	$90 million[28] (est. $132 million in $2011[29])	312[30]

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[18] *See Final Guideline Document: Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants*, EPA-450/2-77-005, § 3.1, at 3-5 to 3-15 (Tables 3-3 to 3-6) (Mar. 1977).

[19] 42 Fed. Reg. 55,796 (Oct. 18, 1977) ("control of sulfuric acid mist emissions from existing sulfuric acid plants").

[20] *See Final Guideline Document: Control of Sulfuric Acid Mist Emissions from Existing Sulfuric Acid Production Units*, EPA-450/2-77-019, § 2.2.1, at 2-2 (Sept. 1977) ("U.S. production capacity in March 1971 was estimated at 38.6 million short tons and was accounted for by 251 plants.").

[21] 44 Fed. Reg. 29,828 (May 22, 1979) ("control of total reduced sulfur (TRS) emissions from existing kraft pulp mills").

[22] *See Kraft Pulping: Control of TRS Emissions from Existing Mills*, EPA-450/2-78-003b, § 8.5, at 8-34 (Table 8-14) (Mar. 1979).

[23] These cost estimates were expressed in $1976. Calculation obtained at http://www.dollartimes.com/calculators/inflation.htm.

[24] *See Kraft Pulping: Control of TRS Emissions from Existing Mills*, EPA-450/2-78-003b, § 3.1, at 3-1 (Mar. 1979) ("As of December 1975, there were 56 firms operating about 120 kraft pulping mills in 28 states.").

[25] 45 Fed. Reg. 26,294 (Apr. 17, 1980) ("control [of] fluoride emissions from existing primary aluminum plants").

[26] *See Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants*, EPA-450/2-78-049b, § 3.1.1, at 3-1 (Dec. 1979) ("Primary capacity in the U.S. at the end of 1977 was estimated at 5.19 million short tons and was accounted for by 31 plants.") (footnotes omitted).

[27] 61 Fed. Reg. 9,905 (Mar. 12, 1996) ("The emissions of concern are non-methane organic compounds (NMOC) and methane.").

[28] "The nationwide cost of the EG [emission guidelines, *i.e.*, the existing-source rule under Section 111(d)] would be approximately $90 million." 61 Fed. Reg. at 9,916.

The current Section 111(d) proposal would transform this regulatory backwater into the single most intrusive and prominent aspect of the Clean Air Act, by requiring that states formulate plans that change how electricity is generated, supersede traditional state public service commission authority, and affect how consumers use electricity. There is a long history of federal courts invalidating similar attempts by administrative agencies to unmoor limited grants of legislative authority like Section 111(d) from their organic statutes by transforming them into broad mandates that aggrandize agencies' power at the expense of the states and the regulated community. For example, in *Electric Power Supply Association v. FERC*, 753 F.3d 216 (D.C. Cir. 2014), the D.C. Circuit rejected the Federal Energy Regulatory Commission's recent attempt to regulate retail energy demand in the guise of regulating wholesale electric markets, because that regulation would impair states' exclusive right to regulate retail electric markets and lacked any meaningful "limiting principle." *Id.* at 221. The lack of a limiting principle was key, because if this justification for FERC's exercise of its authority prevailed, it could authorize virtually any intrusion on state retail electric market regulatory authority, allowing FERC to arrogate broad authority that Congress did not confer. Notably, the connection between FERC's area of authority (wholesale electricity market) and the challenged regulation (retail energy demand) was considerably more direct than here, and yet the regulation was held to exceed the Commission's statutory authority nonetheless.

Similarly, in *California Independent System Operator Corp. v. FERC ("CAISO")*, 372 F.3d 395, 399 (D.C. Cir. 2004), the D.C. Circuit rejected FERC's attempt to replace the California Independent System Operator Corporation's governing board under its authority to regulate "practice[s]" affecting "rates and charges" in the wholesale electric markets. The court held that the issue is not whether "the word 'practice' is, in some abstract sense, ambiguous, but rather whether, read in context and using the traditional tools of statutory construction, the term 'practice' can encompass the procedures used to select CAISO's board." *Id.* at 400. The court concluded that FERC's construction of "'practice' in this context is . . . a sufficiently poor fit with the apparent meaning of the statute that the statute is not ambiguous on the very question before us." *Id.* at 401 (citing *Brown*, 513 U.S. at 120). In that case, too, the court found the lack of a limiting principle on FERC's assertion of authority critical because of the "staggering" and "drastic implications of [FERC's] overreaching," noting that the agency's reasoning would "apply to its regulation of all other jurisdictional utilities," allowing it "tomorrow without any

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[29] The 1996 Landfill Rule did not specify which year's dollars were used in the cost estimate. Assuming $1995, that translates to $131 million in $2011 (calculation obtained at http://www.dollartimes.com/calculators/inflation.htm).

[30] "The EG will require control of approximately 312 existing landfills." 61 Fed. Reg. at 9,914.

further precedent or any further claim of expanded power" to, for instance, remove and replace Duke's or Dynegy's boards of directors.[31]

This line of authority unquestionably forbids EPA's attempts to interpret the Clean Air Act so as to aggrandize its authority to regulate greenhouse gases in a manner untethered to the historic understanding of the Act. In *Utility Air Regulatory Group v. EPA* ("*UARG*"), 134 S. Ct. 2427 (2014), the Court considered EPA's interpretation of its permitting authority under the Act's prevention of significant deterioration preconstruction permitting program. EPA interpreted these provisions to include greenhouse gases among those pollutants that trigger an emitting source's obligation to obtain certain preconstruction and operating permits, thereby massively expanding the permitting provisions' potential reach beyond anything of which Congress could have conceived at the time it passed the Act. The Court held EPA's interpretation unreasonable in part "because it would bring about an enormous and transformative expansion in EPA's regulatory authority without clear congressional authorization." *Id.* at 2444. "When an agency claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy, we typically greet its announcement with a measure of skepticism." *Id.* (internal quotation marks and citation omitted). *See also Chisom v. Roemer*, 501 U.S. 380, 396 n.23 (1991) ("'In a case where the construction of legislative language such as this makes so sweeping and so relatively unorthodox a change as that made here, . . . judges as well as detectives may take into consideration the fact that a watchdog did not bark in the night.'") (quoting *Harrison v. PPG Indus., Inc.*, 446 U.S. 578, 602 (1980) (Rehnquist, J., dissenting)); *Aid Ass'n for Lutherans*, 321 F.3d at 1175 ("Given the extremity of the effect that results from the Postal Service's interpretation, we would expect to see some indication that Congress intended such an effect, but we find no[ne] in the statute . . . .").

Section 111(d) was never intended to authorize EPA to establish a *de facto* national energy policy. To interpret Section 111(d) in that manner would expand and transform EPA's regulatory authority in ways that Congress never intended. Indeed, the transformation here is even more extreme than the one that the Supreme Court recently rejected in *UARG*. There, EPA "merely" proposed to rewrite a pre-existing permitting regime to include greenhouse gases, largely (but not solely) in situations where industrial sources would already have to obtain preconstruction or operating permits. But in the case of Section 111(d), the agency proposes to create a new regulatory program from whole cloth that applies without limitation to all fossil fuel-fired power plants and any other source "roped in" by a state or EPA in a manner that constitutes centralized energy and economic reorganization. To say the least, "skepticism" is all the more appropriate in the face of such a sweeping proposal, *UARG*, 134 S. Ct. at 2444. Whatever gaps or ambiguities EPA purports to discover and interpret in the Clean Air Act, the agency cannot bootstrap them into providing it "an unheralded power to regulate" the states' energy sectors, *id.*

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[31] Another important consideration in the *CAISO* case was the conflict that this action would cause with other federal statutes, yet another unlawful characteristic of the Section 111(d) proposal that is discussed in detail below. 372 F.3d at 404; *see infra* Section VI.

To make the situation worse for EPA, the sweeping assertion of authority in its Section 111(d) proposal not only violates the Clean Air Act's text and structure, but also infringes on a traditional area of state authority. As a result, the Section 111(d) proposal implicates black-letter precedent requiring Congress to provide an extremely clear statement of its intent to authorize such an intrusion on the state's traditional police powers.

Most recently, in *Bond v. United States*, 134 S. Ct. 2077 (2014), the Supreme Court overturned the conviction of a Pennsylvania woman under the implementing legislation for the Chemical Weapons Convention. "Because our constitutional structure leaves local criminal activity primarily to the States, we have generally declined to read federal law as intruding on that responsibility, unless Congress has clearly indicated that the law should have such reach." *Id.* at 2083. This reasoning is not limited to the criminal context, but derives from the broader principle that "'it is incumbent upon the federal courts to be certain of Congress' intent before finding that federal law overrides' the 'usual constitutional balance of federal and state powers.'" *Id.* at 2089 (quoting *Gregory v. Ashcroft*, 501 U.S. 452, 460 (1991)). In other words, "it is appropriate to refer to basic principles of federalism embodied in the Constitution to resolve ambiguity in a federal statute." *Id.* at 2090. Finding no "clear statement that Congress meant the statute to reach local criminal conduct," the court held that the statute did not do so. *Id.*

Similarly, in *American Bar Association v. FTC*, 430 F.3d 457 (D.C. Cir. 2005), the D.C. Circuit held that the FTC could not regulate attorneys under the Gramm-Leach-Bliley Act on the theory that attorneys and their law firms were "financial institutions" because they were "entities engaged in 'financial activities.'" *Id.* at 466. At *Chevron* step one, the court determined that the statute's broad definition of "financial institution" was not ambiguous in the manner asserted by the FTC, in part because the court found "it difficult to believe that Congress, by any [latent] ambiguity, intended to undertake the regulation of the profession of law—a profession never before regulated by 'federal functional regulators'—and never mentioned in the statute." *Id.* at 469. And at *Chevron* step two, the court determined that, even if the statute were ambiguous in the necessary sense, under *Gregory* and other precedent, Congress had not made the requisite clear statement that it intended to alter the usual constitutional balance by invading areas of traditional state sovereignty. *Id.* at 471-72.

Simply put, Congress has given no clear indication of its intent to authorize EPA to invade state authority to decide energy and resource-planning policy. *Bond* and *American Bar Association* reinforce the fact that under the "usual constitutional balance," these are areas of traditional state jurisdiction, and that any arguable ambiguity found, for instance, in the breadth of terms such as "system of emission reduction" must be resolved in the states' favor by reference to the "basic principles of federalism."

IV. Section 111(d) Limits EPA's Role in the First Instance to Procedure, Not Substance

Consistent with Congress's view of Section 111(d) as a limited program for filling a minor regulatory gap for certain minor categories of sources, Section 111(d) limits EPA's role to one of procedure. EPA may promulgate regulations to establish a "*procedure*" under which states submit implementation plans that establish standards of performance for existing sources subject to regulation under Section 111(d). But the states, in developing their implementation plans, are the ones on whom Congress conferred authority to actually establish "standards of performance" for existing sources. *See* 42 U.S.C. § 7411(d)(1) (directing EPA to "prescribe regulations which shall establish a *procedure* . . . under which each State shall submit to the Administrator a plan" that establishes standards of performance) (emphasis added). *Compare* § 7411(b)(1)(B) (directing EPA to "establish[] Federal *standards* of performance for new sources" directly) (emphasis added).

EPA promulgated general "implementing regulations" under Section 111(d) in 1975. *State Plans for the Control of Certain Pollutants from Existing Facilities*, 40 Fed. Reg. 53,340 (Nov. 17, 1975), *codified as amended at* 40 C.F.R. §§ 60.22-60.29. Under these regulations, EPA may promulgate "emission guidelines" that reflect EPA's opinion as to the degree of emission reduction achievable through the "best system of emission reduction" that the agency believes to be "adequately demonstrated" for the regulated existing sources. *See* 40 C.F.R. §§ 60.21(e) (defining "emission guideline"), 60.22(b)(5). But the states are expressly authorized by the Clean Air Act to apply less stringent standards to individual sources or classes of sources. 42 U.S.C. § 7411(d)(1). In so doing, *states*—not the EPA—consider cost, practical achievability, a source's "remaining useful life," and other source-specific factors when applying these standards to particular sources. *Id.*; *see also* 40 C.F.R. § 60.24(f).

Only when a state fails to submit a satisfactory implementation plan—that is, one that is unreasonable or fails to comport with the Act's statutory criteria—is EPA authorized to perform its second function under 111(d)(2): directly prescribing binding standards for sources. *See* 42 U.S.C. § 7411(d)(2); *see also* 40 C.F.R. § 60.27(c)(3). *Cf. Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 494 (2004) (ultimate issue in Prevention of Significant Deterioration program is whether state agency's determinations are "reasonable, in light of the statutory guides and the state administrative record").

EPA's proposal pays lip service to this process while blatantly violating it. The proposal sets a mandatory, binding "goal" for each state, in the form of an emission rate for the state's entire power sector. Under EPA's proposal, once these "goals" are finalized, states will have no discretion to alter them. *See, e.g.*, Proposal, 79 Fed. Reg. at 34,835 ("Once the final goals have been promulgated, a state would no longer have an opportunity to request that the EPA adjust its CO_2 goal."), 34,897-98 (rejecting stakeholder suggestion that states be allowed to quantify levels of emission reduction or otherwise treat EPA's goals "as advisory rather than binding"), 34,892 ("As promulgated in the final rule following consideration of comments received, the interim and final goals will be binding emission guidelines for state plans.").

In fact, even if a state can demonstrate that it cannot meet EPA's projected emission reductions by implementing a particular aspect of the proposed "best system of emission reduction," EPA will not adjust the state's "goal" unless the state demonstrates that it cannot realize additional reductions from applying the *other* aspects of that "system" more aggressively, or from "related, comparable measures." *Id.* at 34,893. The proposal thus violates Congress's unambiguously expressed intent in Section 111(d).

EPA argues that states will still have the flexibility to apply less stringent standards to individual sources, but this elides the real issue. *See* Proposal, 79 Fed. Reg. at 34,925-26. Given the flexibility afforded to states under Section 111(d)'s plain text, valid state implementation plans may result in a range of actual state-wide emission rates. As the states exercise their authority to appropriately adjust EPA's "guidelines" for certain sources and classes of sources, the sources across a given state may in the end collectively emit a substance at a greater or lesser rate. And there is nothing unusual about this result, because before now EPA has properly restricted its 111(d) regulations to set guidelines for source emissions—*not* total state emissions.

EPA attempts to justify this by reference to the statutory definition of "standard of performance" as "a standard for emissions which reflects the *degree* of emission limitation achievable through the application of the best system of emission reduction." 42 U.S.C. § 7411(a)(1) (emphasis added). EPA reads "degree" to mean "portion," and offers the interpretation that "[t]hat 'degree' or portion of the required emission performance level is, in effect, the portion of the state's obligation to limit its affected sources' [aggregate, statewide] emissions that the state has assigned to each particular affected source." Proposal, 79 Fed. Reg. at 34,891. But EPA offers no authority, not even a dictionary citation, for construing "degree" as "portion." And the agency offers no statutory basis for a state's putative obligation to limit its sources' *aggregate* emissions, because there is none whatsoever. States "*establish*" standards of performance "for existing source[s]," thereby setting *those individual sources'* obligations to limit their emissions. The concept of a predetermined aggregate cap under which the *state* parcels out "portions" of *its* limitation obligation has no basis in the implementing regulations or EPA's past practice under 111(d), let alone in the Act itself. EPA's proposal also contradicts itself, as it defines "emission performance level" as "the level of emissions performance for affected entities specified in a state plan." *Id.* at 34,956 (text of proposed rule). That definition describes something already existing under the statute and defined in EPA's regulations: it is precisely the "standard of performance" which the *state* establishes for existing sources under 111(d)(1). But as quoted above, Proposal, 79 Fed. Reg. at 34,891, EPA speaks of sources being "assigned" a portion of a statewide "emission performance level." The agency cannot spin statutory authority for itself out of air simply by multiplying regulatory definitions for terms of its own invention found nowhere in the Act.

In essence, EPA here treats each state as nothing more than a giant source of carbon dioxide, and imposes on each state binding, inflexible emission limits. The so-called "flexibility" offered to states here is no greater than the flexibility a regulated *source* always enjoys under the Clean Air Act, because individual sources can devise alternative methods to reach emission levels prescribed by EPA. *See, e.g.*, 42 U.S.C. § 7411(b)(5), (h) (forbidding EPA to require installation of particular technological systems absent narrowly specified circumstances). But *states* are entitled to flexibility not only in procedural means but also in substantive ends. EPA's proposal reverses this statutory scheme, promoting the agency to the role of setting binding, substantive standards in the first instance and relegating the states to a ministerial, administrative role. In this, EPA claims the authority to strip states of their statutory discretion to take account of their unique circumstances, needs, and interests.

If EPA can ever issue lawful Section 111(d) rules regulating coal-fired power plants—that is, after first having withdrawn its regulation of those power plants under Section 112, and then having issued lawful regulations for new power plants under Section 111(b)—EPA still must adopt a wholly different approach to Section 111(d) regulation than the one it takes in the present proposal. Under this alternative, lawful approach, EPA would analyze the types of projects that could reduce greenhouse gas reduction at existing sources of coal-fired power plants by reference to Section 111's criteria, which considers such factors as cost and performance in arriving at guidelines about what emission rates are actually achievable as the "best system of emission reduction" for various categories and subcategories of fossil-fuel-fired power plants. EPA has completed some of this work with its first "building block," efficiency improvements at power plants, but even that proposal is flawed because it overestimates the efficiency improvements that are available at individual power plants by considering this matter on a statewide basis. Under this lawful approach, states would then establish and apply standards of performance to existing power plants, drawing on their local knowledge and considering the individual sources and classes of sources within their jurisdictions. This approach would honor the proper roles of the federal and state governments and result in performance standards that are appropriate for and achievable by regulated sources.

V. Section 111(d) Is Limited to Source-Level, Inside-the-Fenceline, Unit-by-Unit Emission Reduction Measures

Section 111(d) unambiguously mandates that, where other statutory prerequisites are satisfied, *see supra* Section II., states must establish standards of performance applicable to *individual sources* of pollutants. *See, e.g.*, 42 U.S.C. § 7411(d)(1)(A) (state plans "establish[] standards of performance *for any existing source . . . to which* a standard of performance under this section would apply if such existing source were a new source") (emphasis added). EPA's proposal radically departs from this approach. The agency proposes to determine that the "best system of emission reduction" for power plants is composed of four "building blocks." *See, e.g.*, Proposal, 79 Fed. Reg. at 34,835. Only the first "building block"—efficiency gains from heat-rate improvements achieved "inside the fenceline" of particular coal plants—is arguably authorized under 111(d). *See id.* at 34,859-62; *but cf. UARG*, 134 S. Ct. at 2448 ("assuming without deciding" that another provision of the Act "may be used to force some improvements in energy efficiency" while stressing that "important limitations" must be observed to guard against "'unbounded' regulatory authority," even where EPA regulates only *inside-the-fenceline* energy efficiency).

The other three "building blocks" envision the reshaping of state resource-planning and energy policy, in the form of shifting generation from coal- to gas-fired plants, shifting generation from fossil fuels altogether to renewable resources, and end-use efficiency measures. *See* Proposal, 79 Fed. Reg. at 34,862-75. And while EPA does not formally require states to employ a precise *mixture of* these "outside-the-fenceline" measures, the state "goals" are stringent enough that they cannot be met by the first "building block" alone. (Indeed, the agency does not suggest that they can be.) Many state "goals" are set well below the rate achievable by even a state-of-the-art gas-fired plant, let alone a coal-fired one. *See id.* at 34,895 (Table 8–Proposed State Goals). These "goals" can only be met by substantial revision of a state's sector-wide approach. The "best system of emission reduction" proposed here is therefore a *de facto* national energy policy.

This type of regulatory adventurism contradicts the Supreme Court's recent decision in *UARG*. There, the Court considered limitations on the scope of EPA's authority in requiring sources to apply "best available control technology" for greenhouse gases under the prevention of significant deterioration preconstruction permitting program. The Court observed that such "control technology" cannot require "fundamental redesign" of facilities, is "required only for pollutants that the source itself emits," and "should not require every conceivable change that could result in" improvements. 134 S. Ct. at 2448.

Notably, "performance standards" under Section 111 are closely linked to "best available control technology" by express definition and by statutory context. EPA's 111(d) proposal exceeds those limitations by requiring "fundamental redesign" not only of individual facilities but of a state's entire energy sector and by proposing measures far removed from at-the-source emissions.

First, the program-specific definitions of "best available control technology" and "performance standards"—found, respectively, in the prevention of significant deterioration program and in the new- and existing-source performance standards program (i.e., Section 111)—are highly similar. "Best available control technology" is defined as "an *emission limitation* based on the *maximum degree* of reduction . . . *achievable* for [a] facility." CAA § 169(3), 42 U.S.C. § 7479(3) (emphases added). And "standard of performance" is defined as "a standard for emissions of air pollutants which reflects the *degree of emission limitation achievable* through the application of the best system of emission reduction which . . . has been adequately demonstrated." 42 U.S.C. § 7411(a)(1) (emphasis added). In other words, both terms are defined by reference to "emission limitation"; the primary difference is that "best available control technology" represents the most stringent limitation achievable, whereas "performance standards" are not defined by maximum possible stringency, but by the "best system . . . adequately demonstrated." This relationship is confirmed by the fact that the definition of "best available control technology" explicitly links the two phrases: "best available control technology" must be at least as stringent as Section 111 standards. 42 U.S.C. § 7479(3) ("In no event shall application of 'best available control technology' result in emissions . . . which will exceed the emissions allowed by any applicable standard established pursuant to" 111). The former is simply intended to be a stricter version of the latter.

Second, the Act's general definitions of "emission limitation" and "performance standards" are also closely related. "Emission limitation" is defined at CAA § 302(k), 42 U.S.C. § 7602(k) as "a requirement . . . which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement related to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter." And "performance standards" are defined, in the subsection immediately following, as "a requirement of continuous emission reduction, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction." CAA § 302(*l*), 42 U.S.C. § 7602(*l*). Both terms refer to requirements that cut emissions on a continuous basis, and both are illustrated by the same "including any requirement . . ." phrase. The major difference is that "emission limitation" is given another "including" phrase ("any design, equipment . . ."). In other words, "emission limitations" arguably encompass a broader range of measures than do "performance standards." And because the definition of "performance standards" only contains the "including" phrase that expressly refers to "the operation or maintenance of a source," any confining of "emission limitation"—and therefore of "best available control technology," which, recall, is expressly defined at § 7479(3) as an "emission limitation"—to inside-the-fenceline measures should apply with equal or greater force to "performance standards."

Third, certain provisions of the 2005 Energy Policy Act confirm that "best available control technology" and Section 111 "performance standards" are linked concepts. Congress restricted EPA's ability to rely on data from facilities receiving assistance under that Act when it sets either of these types of standards under the Clean Air Act, *see* 42 U.S.C. § 15962(i). (As discussed at Section II *supra*, EPA's violation of this restriction is one of the reasons why EPA's proposed New Source Rule is unlawful and will not survive review.) Even when drafting legislation that primarily addressed another subject area (energy policy as opposed to pollution control), Congress was mindful of the close relationship between these two terms.

Fourth, at oral argument in *UARG*, the Solicitor General made this argument in an attempt to prevail: "Section 7411 and the PSD program are not aimed at different problems. They are aimed at the same problem, and you can see that from the statutory text. . . . Congress specifically linked the operation of the Section 7411 standards and the Best Available Control Technology under the PSD program. . . . [O]nce Congress has set a standard under Section 7411, . . . that becomes a floor for the evaluation of Best Available Control Technology." *UARG*, No. 12-1146, Transcript of Oral Argument at 46-48 (Solicitor General Verrilli, Feb. 24, 2014). On this point, the government was entirely correct. The two address the same problem and take the same form—how else could one set a "floor" for the other?—and should therefore be subject to the same limitations.

EPA's justifications for not stopping at the fenceline are specious and contrary to the statutory text. *See* Proposal, 70 Fed. Reg. at 34,856. EPA argues that the word "system" in the statutory phrase "best system of emission reduction" is broad enough to encompass these "outside-the-fenceline" measures. *See id. at* 34,885-86 (relying on dictionary definition of "system" as "[a] set of things working together as parts of a mechanism or interconnecting network").

But Section 111 does not actually grant EPA authority to regulate a "system." Rather, the statute provides that EPA and the states may set standards for emissions based on "*the application of* the best system of emission reduction." 42 U.S.C. § 7411(a)(1) (emphasis added). This statutory phrase directs the agency (in the new-source, 111(b) context) or the state (in the existing-source, 111(d) context) to establish standards of performance by applying the "system of emission reduction" *to the individual sources* with the source category being regulated. (In keeping with this, the 111(a) definition section defines "new source" and "stationary source" immediately after defining "standard of performance." *Id.* § 7411(a)(2), (3).)

The term "standard of performance" itself can only be understood in context of a source-specific limit, as it is defined as "a requirement of continuous emission reduction, including any requirement relating to the operation or maintenance *of a source* to assure continuous emission reduction." *See* CAA § 302(*l*), 42 U.S.C. § 7602(*l*) (emphasis added). Indeed, the meaning of the term "application" in the context of a standard for emissions recurs throughout the Act and can only be understood in the context of an individual source. Considering again Section 169(3) of the Act, defining the "best available control technology" ("BACT") that must be applied to new or modified sources under the prevention of significant deterioration program, the Act provides that "[i]n no event shall *application of* [BACT] result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard established pursuant to" Sections 111 or 112. 42 U.S.C. § 7479(3) (emphasis added). Similarly, the definition of lowest achievable emission rate ("LAER") for the nonattainment new source review program provides that "in no event shall the *application of* [LAER] permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance." CAA § 171(3), 42 U.S.C. § 7501(3) (emphasis added). Put another way, whatever the "best system" is, it must be a system that reduces emissions from *a particular source* "to which a standard of performance under this section would apply if such existing source were a new source." 42 U.S.C. § 7411(d)(1)(A)(ii).

Even if EPA did have authority to regulate a "system," its proposed regulation here would fail. "The definition of words in isolation . . . is not necessarily controlling in statutory construction. A word in a statute may or may not extend to the outer limits of its definitional possibilities. Interpretation of a word or phrase depends upon reading the whole statutory text, considering the purpose and context of the statute, and consulting any precedents or authorities that inform the analysis." *Dolan v. U.S. Postal Serv.*, 546 U.S. 481, 486 (2006). In the context of emission control, the Clean Air Act displays a consistent and clear pattern of referring to "systems" as source-specific measures.[32] "Best system of emission reduction" as used in Section

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[32] *See, e.g.*, CAA § 110(j), 42 U.S.C. § 7410(j) (conditioning issuance of all permits required under Title I on a showing by the owner or operator of each new or modified stationary source "that the technological *system* of continuous emission reduction *which is to be used at such source* will enable it to comply with the standards of performance which are to apply to such source . . . .") (emphases added); CAA § 111(b)(5), 42 U.S.C. § 7411(b)(5) (providing that, except as authorized under subsection (h), the Administrator may not require "any new or modified source *to install and operate* any particular technological *system* of continuous emission reduction to comply with any new source standard of performance") (emphases added); CAA § 112(r)(7)(A), 42 U.S.C. § 7412(r)(7)(A) (providing that accidental-release-prevention regulations may "make distinctions between various types, classes, and kinds of facilities, devices and *systems* taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present *at any stationary source*") (emphases added); CAA § 169(3), 42 U.S.C. § 7479(3) (defining best available control technology, or BACT, as an "emission limitation based on maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable *for such facility* through application of production processes and available methods, *systems*, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant") (emphasis added); CAA § 206(a)(2), 42 U.S.C. § 7525(a)(2) ("The Administrator shall test any emission control *system incorporated in a* motor vehicle or motor vehicle engine submitted to him by any person . . . .") (emphasis added); CAA § 206(a)(3)(A), 42 U.S.C. § 7525(a)(3)(A) (Administrator may issue a certificate of conformity only if the manufacturer establishes "that any emission control device, *system*, or element of design *installed on, or incorporated in*, such vehicle or engine conforms to applicable requirements . . . .") (emphases added); CAA § 207(c)(3)(A), 42 U.S.C. § 7541(c)(3)(A) ("The manufacturer shall provide in boldface type on the first page of the written maintenance instructions notice that maintenance, replacement, or repair of the emission control devices and *systems* may be performed by any automotive repair establishment or individual . . . .") (emphasis added); CAA § 402, 42 U.S.C. § 7651a(7) (defining "continuous emission monitoring *system*" as "the *equipment* as required by section 7651k of this title . . . .") (emphases added)); CAA § 415, 42 U.S.C. § 7651n(c) (providing that a coal-fired utility's physical or operational changes

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111 falls within the statute's norm, rather than the exception: "systems" limiting emissions are source-specific unless indicated otherwise. The Section governs the issuance of performance standards, and "standard of performance" is defined at § 7602(*l*) to mean "a requirement of continuous emission reduction, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction." The *only* example given in this definition is expressly source-specific. In the few instances where the Clean Air Act intends the term "system" to refer to a geographically dispersed "set of things," it does so expressly, as in Section 319(a) of the Act, directing the Administrator to "promulgate regulations establishing an air quality monitoring system throughout the United States." 42 U.S.C. § 7619(a).

In this regard, EPA's attempt to take the term "system" out of context is akin to the situation that the Supreme Court faced in *MCI Telecommunications Corp. v. American Telephone & Telegraph Co.*, 512 U.S. 218 (1994). There, the Supreme Court rejected the agency's position that its decision to make tariff filing optional for all nondominant long-distance carriers was within its statutory authority to "modify any requirement" under 47 U.S.C. § 203. *Id.* at 225. Despite the seeming breadth of the term "modify," the court determined that the word's plain meaning is to make a *moderate* change, whereas the challenged order made a "radical or fundamental change." *Id.* at 228-29. Instead, by "eliminat[ing a] crucial provision of the statute for 40% of a major sector of the industry," the agency had engaged in "a fundamental revision of the statute, changing it from a scheme of rate regulation in long-distance common-carrier communications to a scheme of rate regulation only where effective competition does not exist. That may be a good idea, but it was not the idea Congress enacted into law in 1934." *Id.* at 231-32. The order "is effectively the introduction of a whole new regime of regulation," *id.* at 234.

By going beyond source-level, inside-the-fenceline measures, EPA's proposal would expand 111(d), and specifically the underlying statutory term "best system of emission reduction," into "a whole new regime of regulation": one that regulates not only pollutant emission by sources, but a state's entire resource and energy sectors.

And notably, courts have in the past rejected a similar attempt by EPA to re-define the fundamental level at which Section 111's "best system of emission reduction" applies by disaggregating that concept from the concept of an individual source as defined by statute. In *ASARCO Inc. v. EPA*, 578 F.2d 319, 326-27 (D.C. Cir. 1978), the D.C. Circuit invalidated EPA regulations interpreting Section 111(a)(3)'s definition of "stationary source" to "allow a plant operator who alters an existing facility in a way that increases its emissions to avoid application of the NSPSs by decreasing emissions from other facilities within the plant." *Id.* at 325. EPA argued that the broad statutory definition gave it "'discretion' to define a stationary source as

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will not trigger Section 111 applicability where, among other conditions, the unit was inactive for 2 years prior to the 1990 Amendments and "*was equipped* prior to shutdown with a continuous *system* of emissions control" that met certain technical standards) (emphases added).

either a single facility or a combination of facilities." *Id.* at 326. (This type of aggregation is known as the "bubble concept," *e.g.*, *id.* at 321.)

The court disagreed, holding that the "regulations plainly indicate that *EPA has attempted to change the basic unit to which the NSPSs apply* . . . ." *Id.* at 326-27 (emphasis added). (*See also id.* at 322: "The basic controversy in the cases before us concerns the determination of the units to which the NSPSs apply.").[33] In the current Section 111(d) proposal, EPA takes the even more egregious action of changing the field of regulation from *sources* to *a state's entire power sector*. Given that EPA lacks the authority to expand "performance standards" to apply collectively to all regulated facilities at a *single industrial site*, it is not credible to suggest that the "best system of emission reduction" underlying such standards can encompass measures adopted throughout *the state's entire power sector*.

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[33] *ASARCO* does not conflict with the Supreme Court's decision six years later in *Chevron*, holding that the "bubble concept" was appropriate in the context of the nonattainment new source review program. *Chevron, U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984). Whereas *ASARCO* considered the definition of "stationary source" provided in and for Section 111, *Chevron* construed the *undefined* use of the term "major stationary sources" in § 172(b)(6) of the Act (then codified at 42 U.S.C. § 7502(b)(6), with its post-1990 equivalent now found at § 7502(c)(5)).

Section 172(b)(6), added in the 1977 Amendments as part of a new program addressing areas that failed to attain national ambient air quality standards, required state implementation plans under the NAAQS program to "require permits for the construction and operation of new or modified major stationary sources." *See Chevron*, 467 U.S. at 849 & n.22 ("The focal point of this controversy is one phrase in that portion of the [1977] Amendments. . . . Specifically, the controversy in these cases involves the meaning of the term 'major stationary sources' in § 172(b)(6) of the Act . . . ."). The Supreme Court acknowledged the *ASARCO* ruling in three footnotes with no suggestion of disapproval; the two opinions simply construe different terms in different statutory programs. *See id.* at 841 & n.6, 847 n.17, 857 n.29.

The Supreme Court has long maintained that the NSPS and new source review programs have different purposes, with the NSPS program being technology-forcing, and the new source review program being ambient-air-quality focused. *See generally Envtl. Defense v. Duke Energy Corp.*, 549 U.S. 561, 565 (2007) (holding court of appeals erred in requiring EPA to conform its regulations under prevention of significant deterioration program, which is closely linked to new source review program, with "their NSPS counterparts"). Those different purposes apply directly when considering the unit at which state-of-the-art control technology must be employed, the question decided for the NSPS program in *ASARCO*.

Moreover, the decisional criteria applied in *ASARCO* are consistent with those that the Supreme Court later employed in *Chevron*: the *ASARCO* court expressly noted that EPA is entitled to deference when interpreting the Act, *ASARCO*, 578 F.2d at 325, and described the court's role as determining whether an interpretation is "sufficiently reasonable," *id.* at 326 (internal quotation marks omitted). Indeed, *ASARCO* recites as controlling precedent on this point the very same cases which *Chevron* would later follow. *Compare id.* at 326 nn.21, 22 (citing, *inter alia*, *Union Electric Co. v. EPA*, 427 U.S. 246, 256 (1976), *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 75 (1975)), *with Chevron*, 467 U.S. at 843 nn.11, 14 (same).

EPA also argues that it bases its proposed "building blocks" on measures that states are already undertaking. Proposal, 79 Fed. Reg. at 34,856. But a state's exercise of its own policy discretion cannot confer regulatory authority on a federal agency. And EPA expresses concern that, if it limited its proposal to heat-rate improvements achieved inside the fence at individual coal-fired plants, a "rebound effect" would increase operations at these plants and lead to smaller overall reductions. *Id.* at 34,856 & n.93. But the "rebound effect" is nothing new in environmental law. *See, e.g.*, 75 Fed. Reg. 74,152, 74,316-20 (Nov. 30, 2010) (providing detailed discussion of "rebound effect" in fuel-efficiency context). It has never been used as a justification to set state energy policy or otherwise enlarge EPA's authority, and it cannot bear that weight here. EPA also asserts that its additional, beyond-the-fenceline "building blocks" promise additional emission reductions "by significant amounts and at lower costs" than some strategies within the first, inside-the-fenceline "building block." Proposal, 79 Fed. Reg. at 34,856. But even assuming this is true, it is only a reason to propose these measures *if* they are within the agency's power to propose.

EPA hides behind a fig leaf of federalism and flexibility while in effect forcing major changes to the states' administration of electricity generation and consumption. But the radical nature of its proposal becomes all the more evident when one considers what will occur if a state does not submit an implementation plan, or if EPA finds a submitted plan unsatisfactory. The agency will then prescribe a *federal* implementation plan for that state, as authorized by 42 U.S.C. § 7411(d)(2). This plan would apply the range of "building blocks" to the state. That is to say, it would set binding emission limits for coal- and gas-fired power plants that would switch the way that sources are allowed to dispatch, set renewable portfolio requirements that would force electric utilities and others to develop renewable resources against their will in order to be allowed to continue operating existing coal-fired assets, and set the same type of efficiency standards for consumers of electricity that the D.C. Circuit recently invalidated when FERC attempted to do so. This total federal invasion of a state power sector would remove all pretext and expose the true extent of this proposal's violation of state authority. While this would provide clarity, such a catastrophe for federalism is antithetical to the Constitution and cannot be justified under any provision of federal law.

VI. EPA's Proposal Conflicts with the Federal Power Act

The question of what role the federal government and its agencies should play in developing energy policy throughout the country has been considered extensively under the Federal Power Act, Congress's definitive pronouncement on the subject. And while Congress unquestionably did not intend Section 111 as an energy-policy provision at all, assuming *arguendo* that it were capable of being construed to touch on energy policy issues in some meaningful way, such as what type of resources may be used to generate electricity in different states, how state and regional power grids should dispatch power, retail energy-efficiency measures, and the like, then EPA's Section 111(d) proposal directly contravenes Congress's careful decision in the Federal Power Act to preempt only certain aspects of power generation.

If EPA were allowed to capitalize on Section 111(d) to regulate the electric power sector in some manner other than as individual emission sources, then the section "serve[s] the same function" and "relate[s] to the same thing" as the Federal Power Act, and should be interpreted together with it. *See* 2B Sutherland, Statutes & Statutory Construction, § 51:3 (7th ed. 2007) (footnotes omitted) ("Statutes are *in pari materia*—pertain to the same subject matter—when they relate to the same person of thing, to the same class of person or things, or have the same purpose or object."); *see also Erlenbaugh v. United States*, 409 U.S. 239, 245 (1972) (statutes "intended to serve the same function" are construed together); *United States v. Freeman*, 44 U.S. (3 How.) 556, 564-65 (1845) ("The correct rule of interpretation is, that if divers statutes relate to the same thing, they ought all to be taken into consideration in construing any one of them . . . ."). This interpretive mandate is based on the "assum[ption] that whenever Congress passes a new statute, it acts aware of all previous statutes on the same subject." *Erlenbaugh*, 409 U.S. at 244. It is a "tool of statutory construction [that] allows us to consider all statutes that relate to the same topic; therefore, if a thing in a subsequent statute comes within the reason of a former statute, we transpose the former statute's meaning to the thing in the subsequent statute." *United States v. Rodriguez*, 60 F.3d 193, 196 (5th Cir. 1995) (citing *Freeman*).

EPA argues it can use Section 111(d) to address these issues because Congress did not expressly constrain it from doing so. But "[w]here a problem of interpretation was apparently not foreseen by Congress, it is appropriate to consult and be guided by those areas covering the same subject where the expression of legislative intent is clear." *U.S. v. Stauffer Chem. Co.*, 684 F.2d 1174, 1187 (6th Cir. 1982). In the Federal Power Act, Congress's intent was clear: it expressly delineated federal and state jurisdiction over the electric industry. In this regard, the Federal Power Act carefully limits federal authority over the sale of electricity to the transmission and sale at wholesale of electric energy in interstate commerce while expressly disclaiming authority over other matters, such as the generation and local distribution and transmission of electricity, which are reserved for their traditional state regulators:

> The provisions of this subchapter [*i.e.*, subchapter II of the Federal Power Act] shall apply to the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce, *but* except as provided in paragraph (2) *shall not apply to any other sale of electric energy* or deprive a State or State commission of its lawful authority now exercised over the exportation of hydroelectric energy which is transmitted across a State line. The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, *but shall not have jurisdiction*, except as specifically provided in this subchapter and subchapter III of this chapter [*i.e.*, Licensees and public utilities: Procedural and administrative provisions], *over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce*, or over facilities for the transmission of electric energy consumed wholly by the transmitter.

16 U.S.C. § 824(b)(1) (emphases added).[34]

It defies belief to suggest that Congress established as a background principle in the Federal Power Act that federal authority over intrastate energy production, transmission, and distribution (both in itself and through the corresponding subject of electricity sales) was precluded unless specifically provided elsewhere, only to *sub silentio* grant EPA authority under Section 111(d) of the Clean Air Act to address all these aspects of that industry without establishing any delineation of federal and state jurisdiction. *Cf. Boumediene v. Bush*, 553 U.S. 723, 777 (2008) ("If Congress had envisioned [Detainee Treatment Act] review as coextensive with traditional habeas corpus, it would not have drafted the statute in this manner.") (noting absence of savings clause in that Act). If Congress had intended to grant EPA regulatory authority under Section 111(d) to address, as such, states' energy-generation and energy-efficiency policies, it "would not have drafted [Section 111] in th[e] manner" that it did. Instead, it would have laid out a scheme of bifurcated jurisdiction similar to the one it designed in the Federal Power Act. Its total omission of such a scheme shows that it had no such intent.

Congress made a conscious decision in the Federal Power Act not to regulate the generation and distribution of retail electricity precisely because "[t]he FPA authorized federal regulation not only of wholesale sales that had been beyond the reach of state power but also the regulation of wholesale sales that had been *previously subject* to state regulation." *New York v. FERC*, 535 U.S. 1, 21 (2002). In other words, even when Congress was unambiguously invading traditional areas of state regulation, it was careful to limit the extent of the invasion through a savings provision. "[A]ware of [that] previous statute[]," *Erlenbaugh*, 409 U.S. at 244, Congress in subsequently enacting the Clean Air Act surely did not expand another agency's regulatory purview over those areas without limit. *Cf. Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 870 (2000) ("[T]his Court has repeatedly 'decline[d] to give broad effect to saving clauses where doing so would upset the careful regulatory scheme established by federal law.'") (second alteration in original) (quoting *United States v. Locke*, 529 U.S. 89, 106 (2000)). The situation here is precisely the opposite. If, in light of EPA's assertion of authority to address all aspects of the power sector under Section 111, we do *not* read that section in light of the Federal Power Act's savings clause, we "upset the careful regulatory scheme established by federal law." *See, e.g., Union Pac. R.R. Co. v. Cal. Pub. Utils. Comm'n*, 346 F.3d 851, 864 n.17 (distinguishing *Locke* where statute in question addresses area that "[p]rior to that time . . . was largely regulated by the states").

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[34] *See also id.* 16 U.S.C. § 824(a) ("It is declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to generation to the extent provided in this subchapter and subchapter III of this chapter and of that part of such business which consists of the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce is necessary in the public interest, *such Federal regulation, however, to extend only to those matters which are not subject to regulation by the States.*") (emphasis added).

The appropriate response when an agency so brazenly reaches beyond its delegated authority is the one given by the court in *CAISO*. There, FERC argued that its statutory authority to address "'practice[s] . . . affecting [a] rate'" gave it authority to address "the composition of the governing board of a utility and the method of its selection." 372 F.3d at 399 (second and third alterations in original) (quoting 16 U.S.C. § 824e(a)). The agency relied on the breadth of the statutory term "practice," and "apparently would have [the court] hold that the existence of an 'infinitude' of practices supposes that there is also an infinitude of acceptable definitions for what constitutes a 'practice' to give it the authority *to regulate anything done by or connected with* a regulated utility . . . . We are not biting." *Id.* at 401 (emphasis added) (quoting *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985)). The court struck down the agency's interpretation at *Chevron* step one, *id.* at 400, 401.

After concluding that FERC impermissibly stretched the statutory term "practice," the court confirmed its conclusion by considering "the implications of FERC's amorphous defining of the term." *Id.* at 402. "Were we to uphold this theory, the implications would be staggering." *Id.* at 403. But "we really need reach no . . . parade of horribles," because

> [t]he very act attempted by FERC in this case is quite enough to reveal the drastic implications of its overreaching. . . . Congress has created in Title 15 of the United States Code a Securities and Exchange Commission with extensive powers over corporate regulation. Every state has statutes affecting corporate governance. Presumably the members of the federal and state commissions charged with securities and corporate regulation are chosen with an eye to their expertise in matters corporate. Certainly the legislative bodies have given them powers with a view to that subject matter. The same cannot be said of the legislative empowerment of FERC, nor presumably are its members chosen principally for their expertise in corporate structure.

Id. at 404. The same applies here. Congress created in the Federal Power Act a scheme of extensive (but *carefully delineated*) federal regulatory authority over the energy sector. And the states, of course, have their own statutory and regulatory systems that address those aspects of their energy sectors that Congress has reserved to their jurisdiction. EPA's legislative empowerment to regulate pollution emissions from stationary sources cannot plausibly be read to cut across this complex scheme of federal and state regulation.

To confirm that EPA is regulating in an area over which it lacks the requisite "legislative empowerment" and "expertise," one need only look at the reaction to its proposal. Multiple state and federal regulators and stakeholders have expressed grave concern that the proposal—especially because it lacks any formal cooperation with and input from FERC—threatens grave impacts on the reliability and affordability of the nation's energy supply, particularly in its ability to respond to demand spikes in response to extreme weather events. EPA's proposal requires states to undergo significant shifts in energy policy, but Congress never intended EPA to be an energy regulator. Congress's wisdom in that regard is evident from the serious risks posed by EPA's attempt to act in that area without the necessary authorization and experience.

Taking at face value EPA's baseless assertion that Section 111 empowers it to address a state's energy sector as such, basic principles of statutory interpretation require us to evaluate that assertion in light of the Federal Power Act. But where that Act establishes federal authority over the energy sector, it does so with express, detailed attention to demarcating federal and state jurisdiction. The absence from Section 111 of any such attention confirms that EPA's assertion of authority is not correct.

VII. Conclusion

EPA's proposal violates both the letter and the spirit of the Clean Air Act. It violates the "literal" terms of the Clean Air Act, as EPA has itself conceded. Mem. at 26. It has not been promulgated after the adoption of lawful new source rules under Section 111(b). It departs from statutory authority and regulatory tradition to set energy policy for the states. It departs from the appropriate system of "cooperative federalism" by relegating states to an administrative role in place of their proper substantive one. It treats states as nothing more than giant sources of carbon dioxide emissions. It requires states not only to regulate inside-the-fenceline improvements, but also to make sweeping changes to substantially all aspects of their power sectors. It does all this in the face of an explicit statutory prohibition.

This proposal threatens the states' core interests, the proper functioning of their resource and energy policies, and the very federal structure of our government. The commenting states have an obligation to their citizens to vigorously resist this unlawful proposal. EPA should immediately withdraw the proposal, and if it does not do so, EPA should at the very least ensure that any final Section 111(d) regulations are otherwise stayed until all judicial challenges to those regulations are concluded.

Respectfully,

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